Service Manual

VHS PAL Video Cassette Recorder

TEC 3835 E

No. 2899789

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INTRODUCTION

This manual provides service information for our VHS Video Recorder. If describes the principles and adjustments of mechanical and electrical operation for this model.
Service procedures given herein cover only field maintenance services. Adjustments which require high-level instruments, jigs, and techniques are excluded since they should be performed at the factory.
Due to design modifications, the servicing procedures and data given in this manual are subject to possible change without prior notice.

IMPORTANT SAFETY PRECAUTION

Prior to shipment from the factory, our products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol are critical for safety. Replace only with parts number specified.
2. In additon to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   - Wires covered with PVC tubing
   - Double insulated wires
   - High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   - Insulation tape
   - PVC tubing
   - Spacers
   - Insulation sheets for transistors
5. When replacing AC primary side components (transformers, power cords, etc.), wrap ends of wires securely on the terminals before soldering.
6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. When a power cord has been replaced, check that force (maximum applied force should be 20-30 lbs.) in any direction will not loosen it.
9. Also check areas surrounding repaired locations.
10. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside of unit.

SAFETY CHECK AFTER SERVICING

1. **Insulation resistance test**
   Confirm specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, video and output terminals, etc.).
2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio output terminals, etc.).
3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance.

ELECTRICAL ADJUSTMENT

PREPARATION

Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.

Required Test Equipment

1. Oscilloscope: Wide-band, Dual-trace W/EXT TRIG 40MHz
2. Frequency counter (7 digits or higher)
3. Color Monitor Television
4. Test tape: TPS-1, 2, 3, 6
5. Audio Noise Meter or Distortion Metre
6. Test Signal Generator LCG 399A (PAL) or LGC-404 (PAL/SECAM)
7. Wave form monitor
8. Vector Scope

Alignment Tape Contents

Ref. No.	Video Signal	Audio Signal	Applications
TPS-2	Centre Cross	1 kHz (−20dB) 6 kHz (−20dB)	● Audio Frequency Responce ● Skew Check
TPS-6	Digital Patern	3 kHz (−20dB)	● Reslution Check ● Wow and Flutter Checks ● Picture Quality Check
TPS-3	Colour Bar	1 kHz (−10dB)	● Y-level Adjustment ● C-level Adjustment ● Audio Level Check
TPS-1	Stairstep	6 kHz (−10dB)	● Tracking Volume Preset ● Audio Azimuth

TEST POINT

TEST POINT	DESCRIPTION	PART NO
TP-A	VIDEO OUT	21 PIN CONNECTOR
TP-B	CTL	J336
TP-C	RFS	J327
TP-D	GND	J326
TP-E	PB ENV	R116
TP-H	SYNC TIP LEVEL	R117
	WHITE PEAK LEVEL	
TP-J	REC C	R117
	REC Y	
TP-K	CCD LEVEL	J226
TP-Z	GND (LINEAR)	DECK

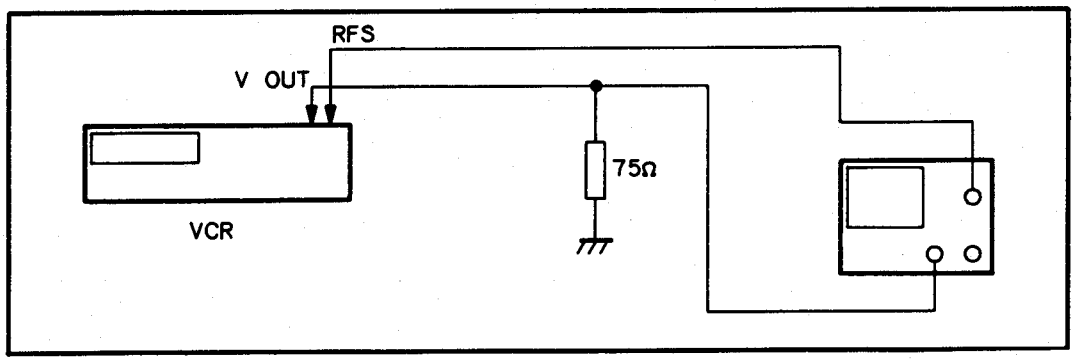
1. SWITCHING POSITION ADJUSTMENT (PG-1, PG-2)

Specified Tape TPS-1 (A: 6KHz V: Stairsteps)

Specified Measuring Equipment Oscilloscope (Dual-Trace W/EXT TRIG 40MHz)

Connections

Oscilloscope Ch. 1 probe to VIDEO OUT
Oscilloscope EXT TRIG probe core to TP-C
Oscilloscope EXT TRIG probe GND to TP-D

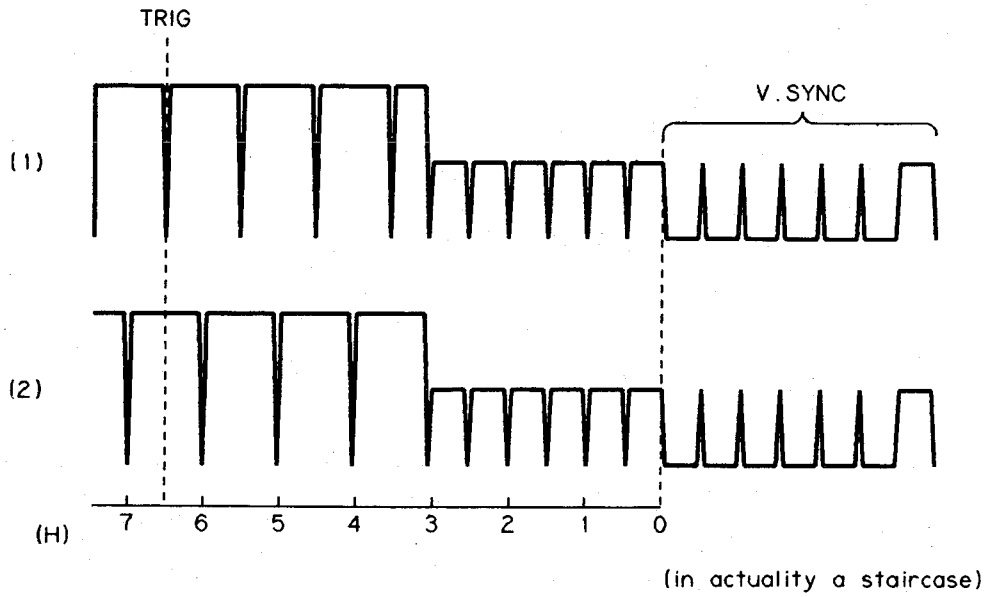


Adjustments

At PCB PG-1 ADJ. *V.R. set to that the no. of horizontal scan lines from the FR switching position to the V SYNC leading edge is 6.5 H.... PG-1
At PCB PG-2 ADJ. V.R. set to that the no. of horizontal scan lines from the RF switching position to the V SYNC leading edge is 6.5 H.... PG-2

*V.R.=VARIABLE REGISTOR

VHS SPECIFICATION 6.5±1.5 H



(in actuality a staircase)

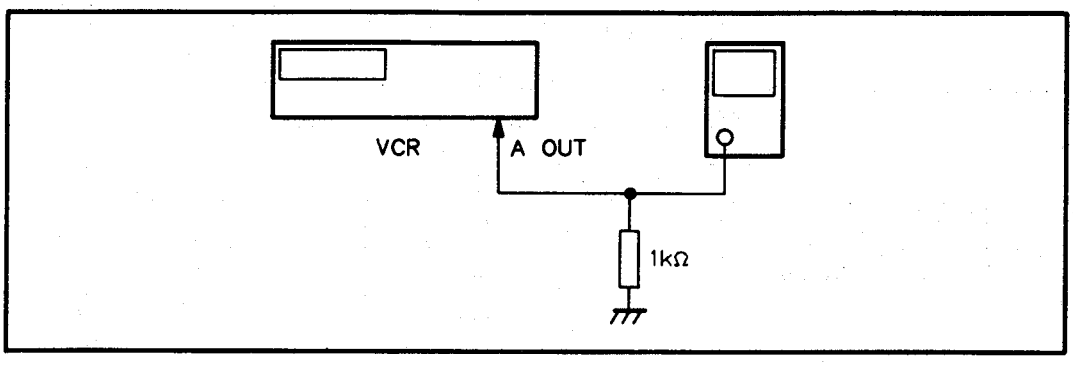
Whether waveform (1) or (2) is present, adjust to 6.5H.

2. AUDIO AZIMUTH ADJUSTMENT

Specified Tape TPS-1 (A: 6kHz V: Stairstep)

Specified Measuring Equipment AUDIO NOISE METRE (MN-445A, or equivalent)

Connections AUDIO OUT: AUDIO NOISE METRE (w/1kΩ load)



Adjustments Adjust the AUDIO HEAD AZIMUTH screw so the AUDIO OUT 6k output level is maximum with the TPS-1 in the playback mode (refer to diagram of deck adjustment locations for AUDIO HEAD AZIMUTH screw position).

Precautionary Items Affix thread lock after adjusting. If, after completion of x-value adjustment, the AUDIO HEAD AZIMUTH is readjusted, readjust x-value as well.

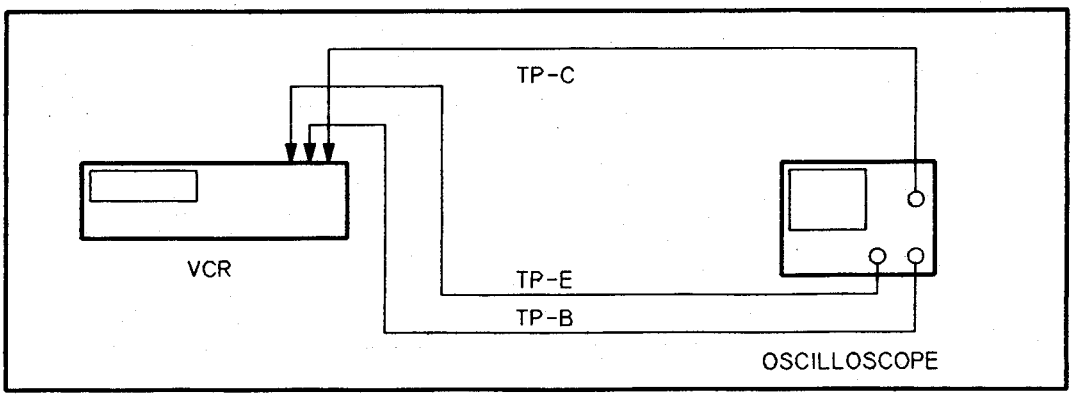
3. X-VALUE ADJUSTMENT

Specified Tape TPS-1 (A: 6kHz V: Stairstep)

Specified Measuring Equipment Oscilloscope (Dual-Trace W/EXT TRIG 40MHz)

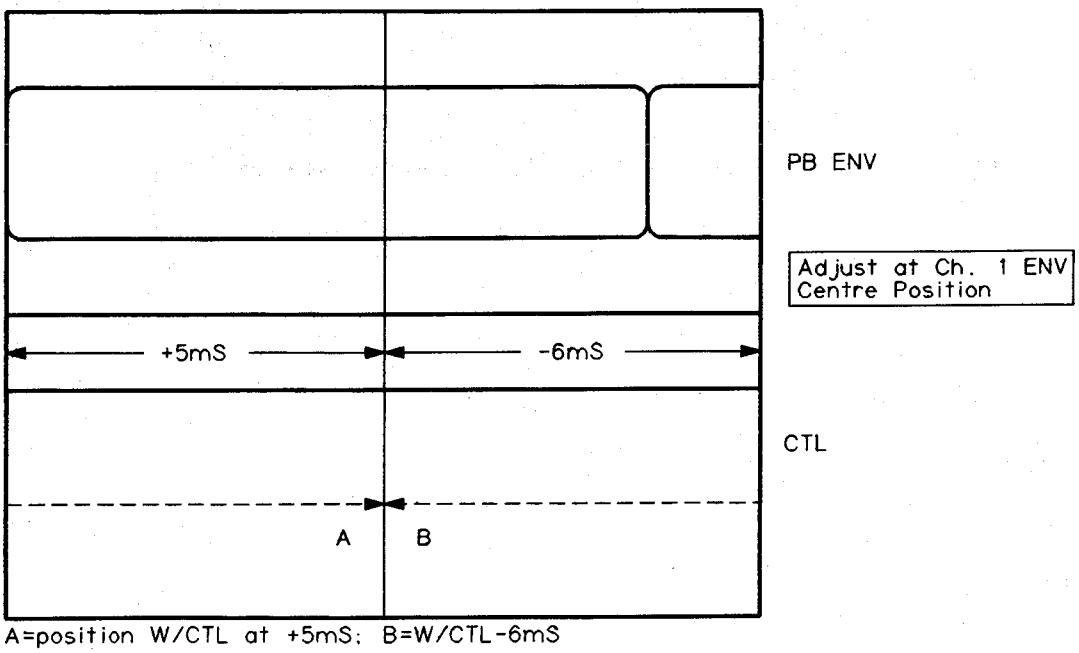
Connections

Oscilloscope Ch. 1 probe to TP-E
Oscilloscope Ch. 2 probe to TP-B
Oscilloscope EXT TRIG probe core to TP-C
Oscilloscope EXT TRIG probe GND to TP-D



Adjustments

At tracking V.R. set the x-value screw so that envelope output levels are balanced when the CTL pulse is moved from the preset position to +5ms/−6ms (return tracking V.R. to centre after adjustment is finished).



A=position W/CTL at +5mS; B=W/CTL-6mS

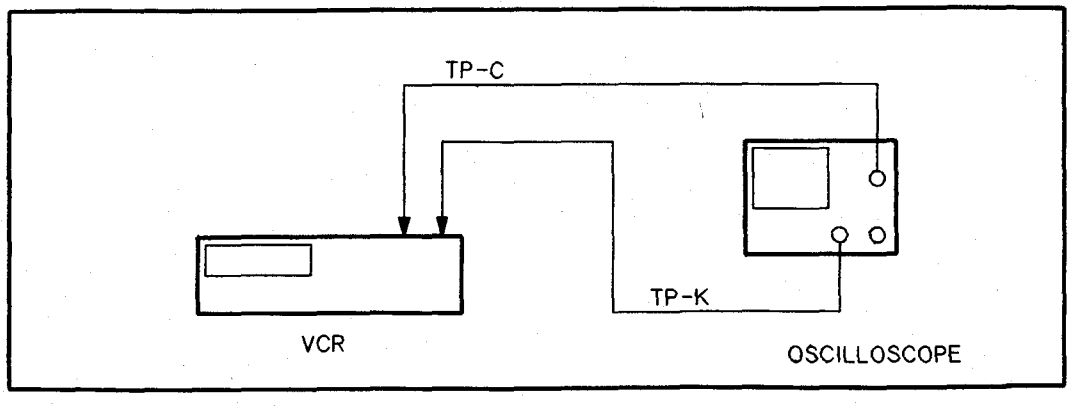
4. CCD LEVEL ADJUSTMENT

Specified Tape TPS-3 (A: 1kHz V: EBU Colour Bar)

Specified Measuring Equipment Oscilloscope (Dual-Trace W/EXT TRIG 40MHz)

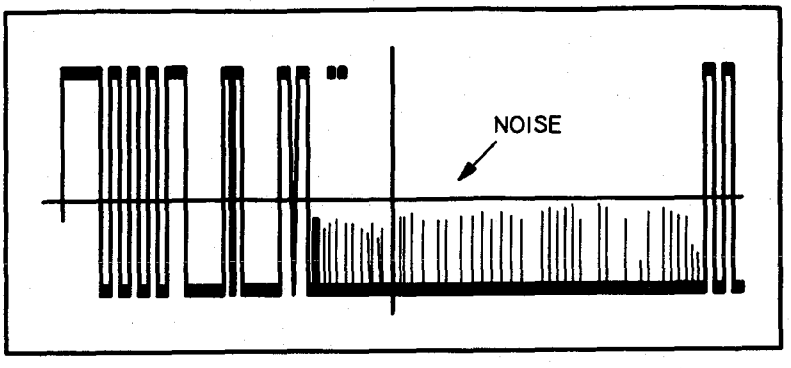
Connections

Oscilloscope probe core to TP-K
Oscilloscope EXT TRIG probe core to TP-C
Oscilloscope EXT TRIG probe GND to TP-D



Adjustments

Adjust the CCD LEVEL ADJ. V.R. so that the noise element in the waveform of TP-K output is minimal as possible.



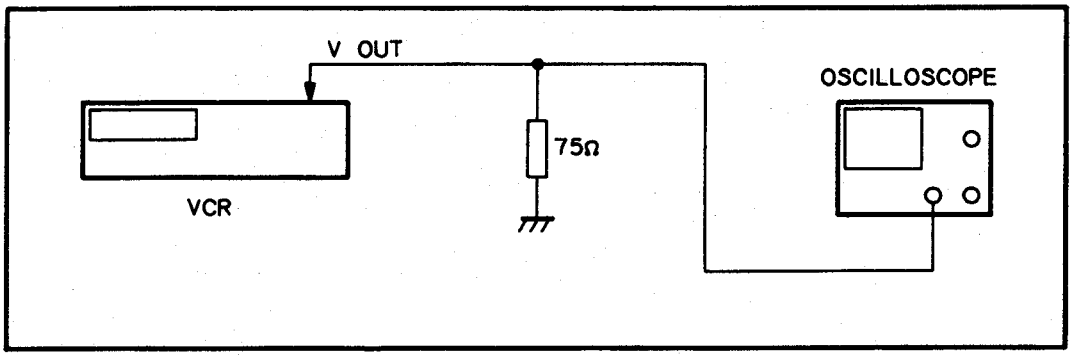
Oscilloscope Setting TIME/DIV: 0.1mS VOLTS/DIV: 0.1V (Probe x 10)

5. PB Y LEVEL ADJUSTMENT

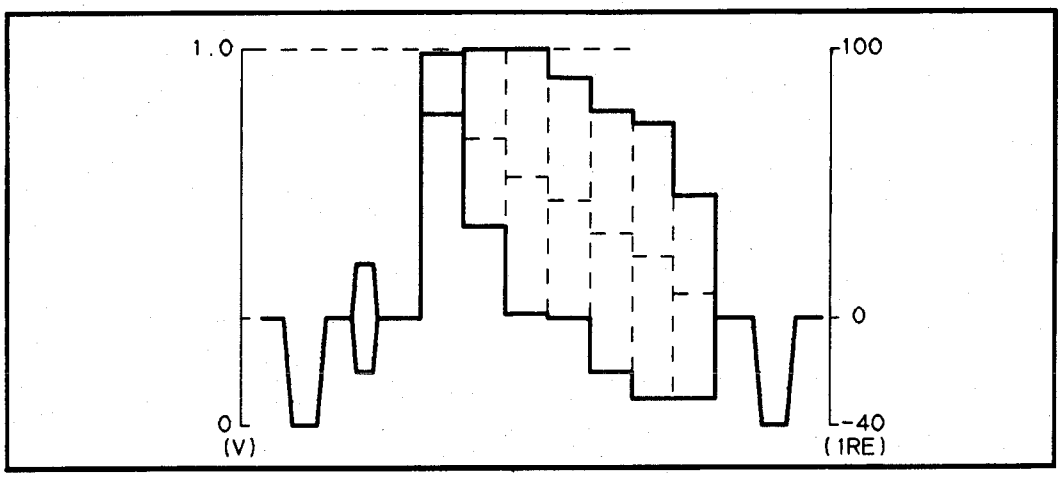
Specified Tape TPS-3 (A: 1KHz V: EBU Colour Bar)

Specified Measuring Equipment Oscilloscope (Dual-Trace W/EXT TRIG 40MHz)

Connections VIDEO OUT: Oscilloscope (W/75Ω load)



Adjustments At PCB PB Y LEVEL ADJ. V.R., set VIDEO OUT output level to 1.0 ± 0.1 Vp-p.



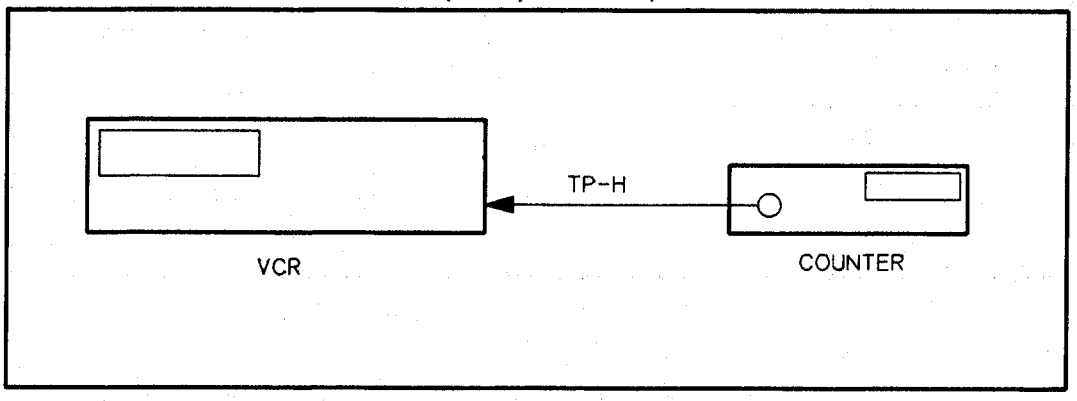
6. SYNC TIP LEVEL ADJUSTMENTS (CARRIER)

Measurement Tape REC Mode (Blank Tape T-120 TDK, Victor: Normal)

Specified Measurement Equipment PAL SIGNAL GENERATOR (LCG-399A or 404 Type Leader Electronics or equivalent)

Test Signal NO SIGNAL

Connections VIDEO IN: N.C
VIDEL OUT: N.C.
Connect frequency counter probe core to TP-H
Connect frequency counter probe GND to TP-Z.



Adjustments At PCB SYNC TIP LEVEL ADJ. V.R. set test pin TP-H frequency to 3.8±0.1MHz.

Precautionary Items When adjusting VIDEO IN without any signal, set to 3.8±0.1MHz.
Verify that the TV tuner is not receiving any broadcast at this time.
It is helpful to calibrate the oscilloscope probe using the frequency counter probe.

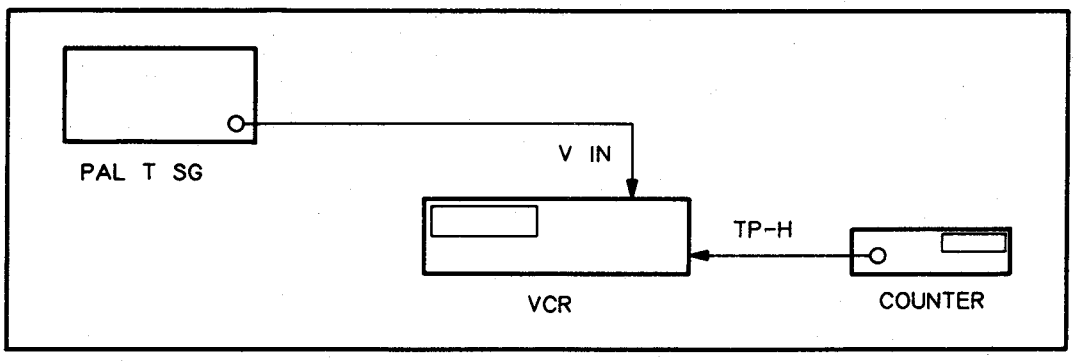
7. WHITE PEAK LEVEL ADJUSTMENT (DEVIATION)

Measurement Tape REC Mode (Blank Tape T-120 TDK, Victor: Normal)

Specified Measurement Equipment PAL SIGNAL GENERATOR (LCG-399A or 404 Type Leader Electronics or equivalent)
Frequency Counter (LDC-825 Type Leader Electronics or equivalent)

Test Signal White Raster 100% (Refer to Test Signal Chart)

Connections VIDEO IN: TEST SIGNAL GENERATOR
VIDEO OUT: N.C.
Connect frequency counter probe core to TP-H
Connect frequency counter probe GND to TP-Z.



Adjustments At PCB WHITE PEAK LEVEL ADJ. V.R., set test pin TP-H to 4.6 ± 0.05 MHz.

Precautionary Items White and yellow portions will become whitish if the self-recording and playback of the colour bar is carried out with the white peak level over 4.2MHz.
Adjust SYNC TIP LEVEL V.R. and WHITE PEAK LEVEL to their respective frequencies by turn balancing them against each other.

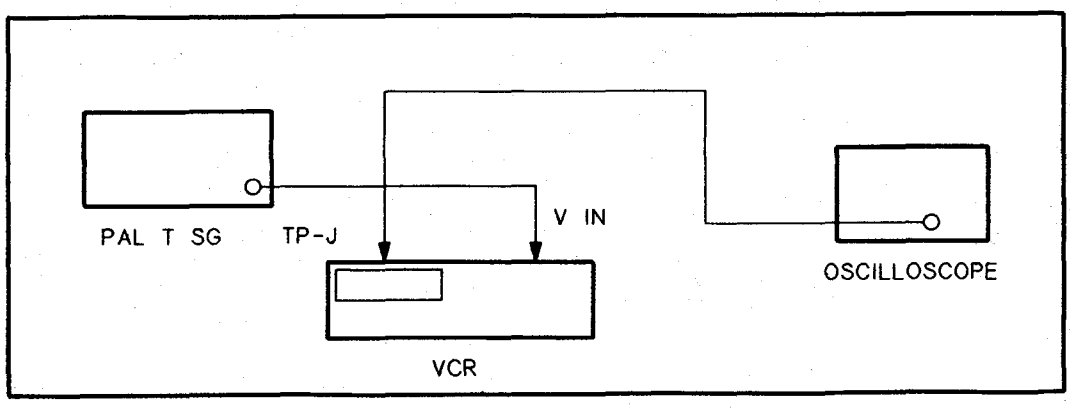
8. REC C LEVEL ADJUSTMENT

Measurement Tape REC Mode (Blank Tape T-120 TDK : Normal)

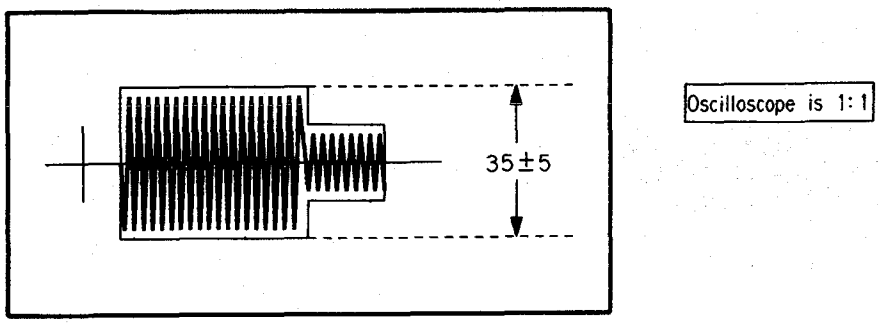
Specified Measurement Equipment PAL SIGNAL GENERATOR (LCG-309A or 404 Type Leader Electronics or equivalent). Oscilloscope (40MHz W/EXT TRIG)

Test Signal EBU Colour Bar (Refer to Test Signal Chart)

Connections VIDEO IN: TEST SIGNAL GENERATOR
VIDEO OUT: N.C.
Connect oscilloscope probe to deck head amp TP-J (connect probe earth to the head amp shield case).



Adjustments Completely cut Y level by rotating PCB REC Y LEVEL ADJ. V.R. REC Y level semi-fixed V.R. as far as possible in a clockwise direction.
At PCB REC C LEVEL ADJ. V.R. set TP-J output waveform to 35±5 m Vp-p.



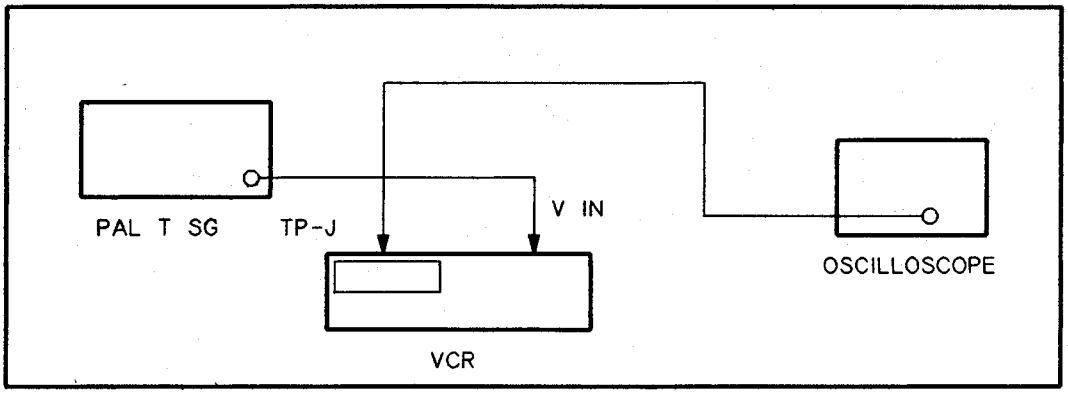
9. REC Y LEVEL ADJUSTMENT

Measurement Tape REC Mode (Blank Tape T-120 TDK: Normal)

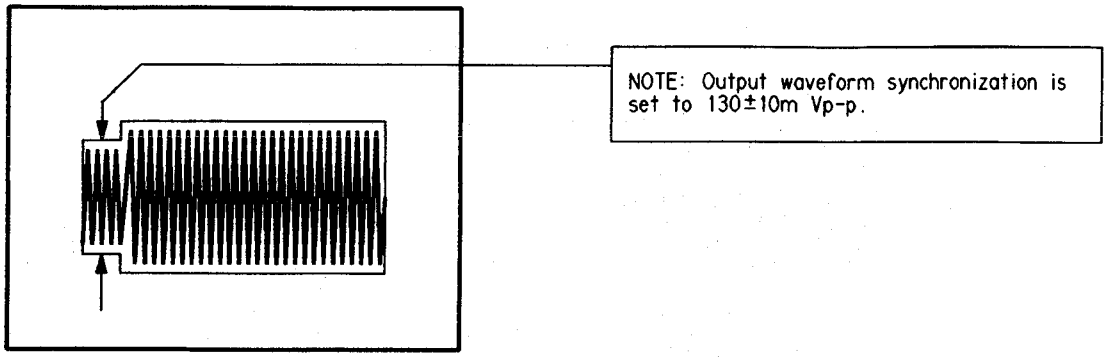
Specified Measurement Equipment PAL SIGNAL GENERATOR (LCG-399A Type Leader Electronics or equivalent)
Oscilloscope (40MHz W/EXT TRIG)

Test Signal EBU Colour Bar (Refer to Test Signal Chart)

Connections VIDEO IN: TEST SIGNAL GENERATOR
VIDEO OUT: N.C.
Connect oscilloscope probe to deck head amp TP-J (connect probe earth to the head amp shield case).



Adjustments At PCB REC Y LEVEL ADJ. V.R. set TP-J output waveform to 130± 10m Vp-p.



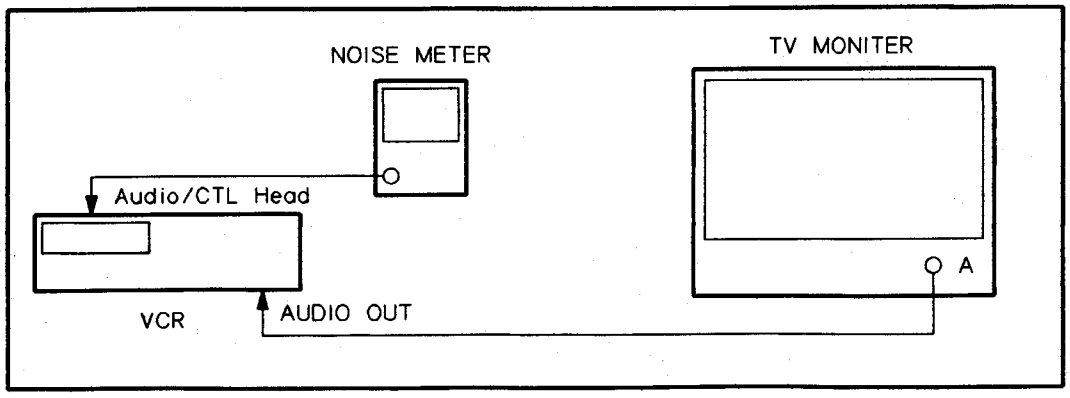
10. BIAS LEVEL ADJUSTMENT

Measurement Tape REC Mode (Blank Tape T-120 TDK: Normal)

Specified Measurement Equipment AUDIO NOISE METRE (MN-445A or Equivalent).

Connections

VIDEO IN: N.C.
VIDEO OUT: N.C.
AUDIO IN: N.C.
AUDIO OUT: Connect to TV monitor, etc.
Connect audio noise meter probe core to AUDIO/CTL Head lower side pin.
Connect audio noise meter probe earth to AUDIO/CTL Head upper side pin.



Adjustments At PCB BIAS LEVEL ADJ. V.R. set voltage between Audio/CTL Head lower pin terminals at 3.5 ± 0.5mV.

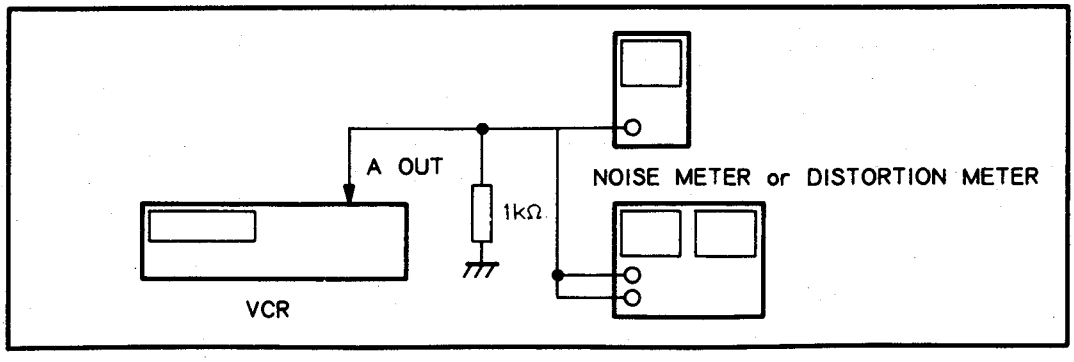
Precautionary Item Adjust very carefully, as carrying out self-recording and playback of the audio signal results in a drop in output and greater distortion.

11. AUDIO OUTPUT LEVEL ADJUSTMENT

Specified Tape TPS-3 (A: 1kHz V: EBU Coloar Bar) PLAY Mode

Specified Measurement Equipment AUDIO NOISE METER (MN-445A or Equivalent).
Automatic Distortion Meter (760D or Equivalent).

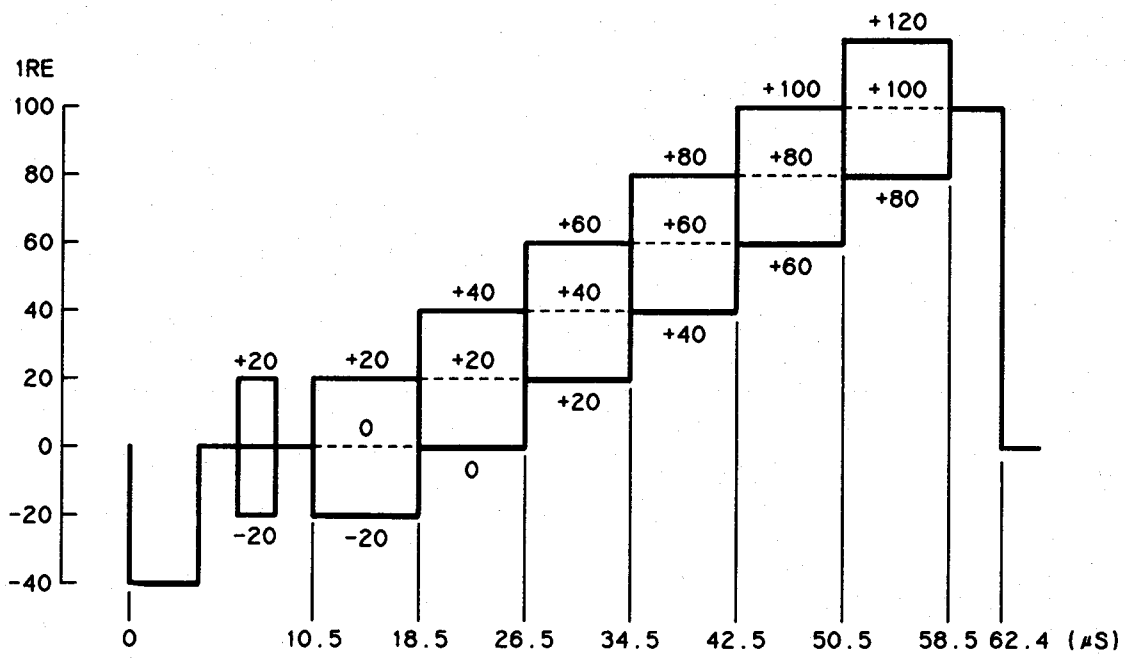
Connections Audio Out: to either noise meter or distortion meter



Adjustments At PCB AUDIO output level ADJ. V.R. set so that the 1kHz level at 1kΩ load is 200mVrms. At the same time, verify that distortion is within 3%.

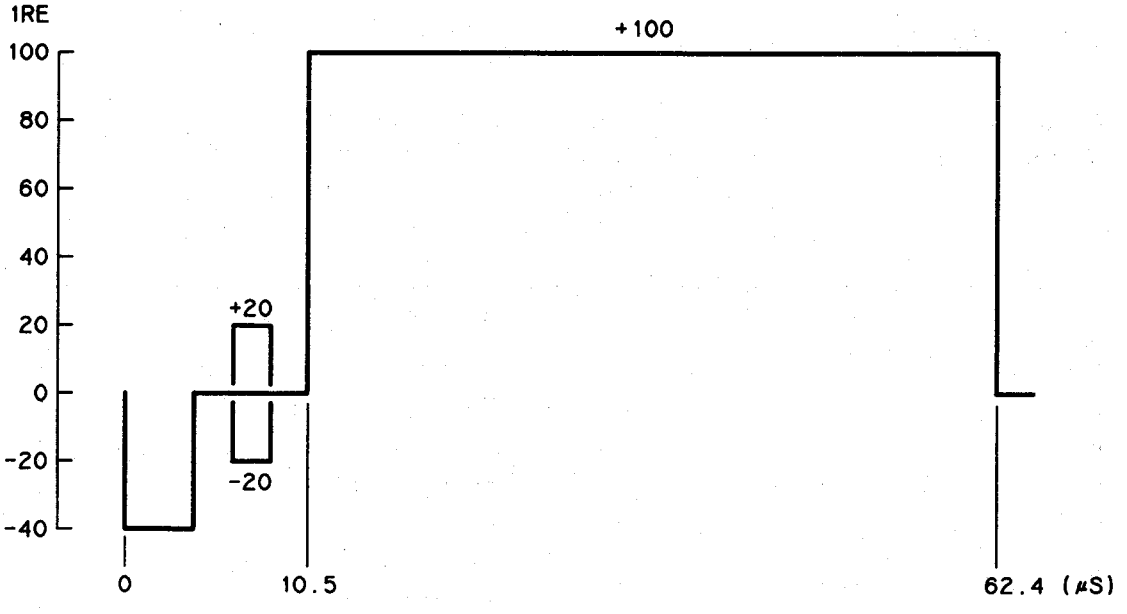
Precautionary Item No nise, oscillation, etc. in audio output waveform.

MODULATION 5 STEPS



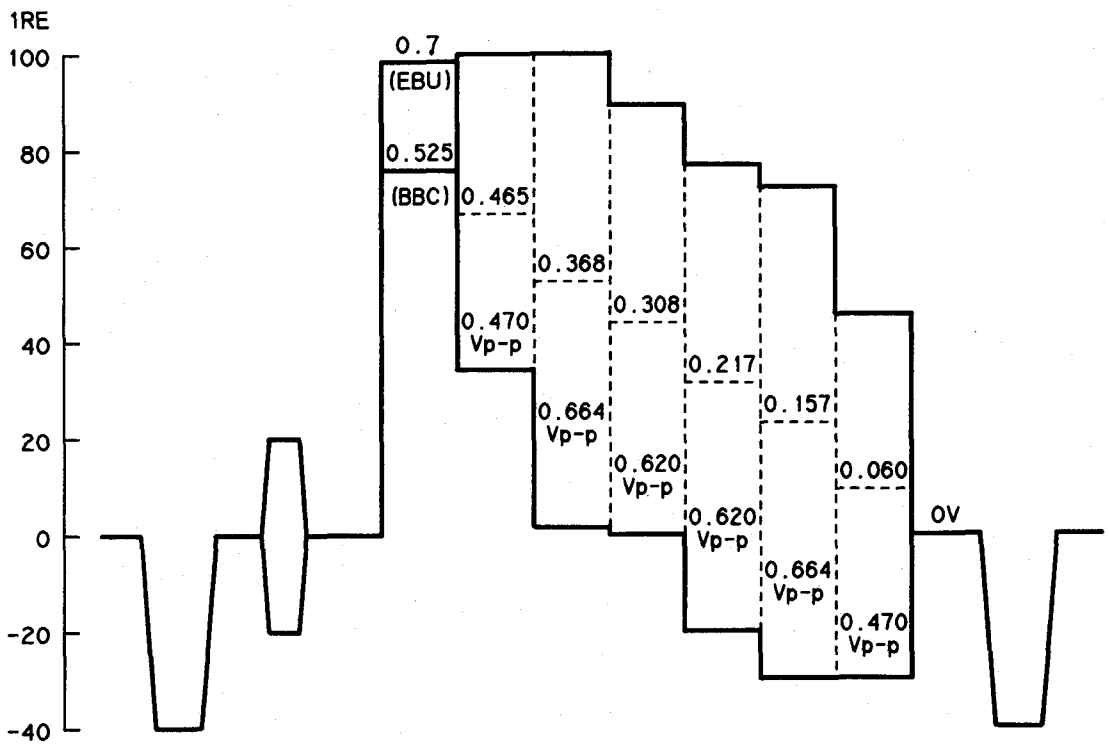
Modulation 5 Steps (Dotted Lines are the Y Level & 5 Steps)

WHITE RASTER

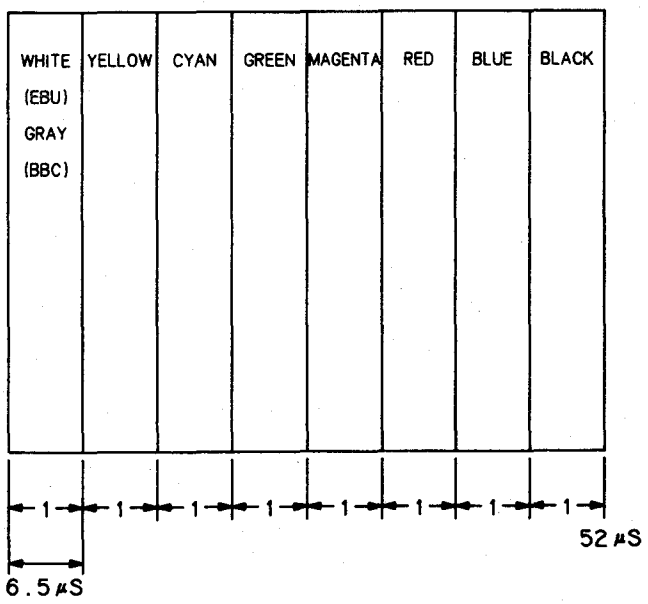


White Raster

EBU, BBC COLOUR BAR



COLOUR BAR PICTURE

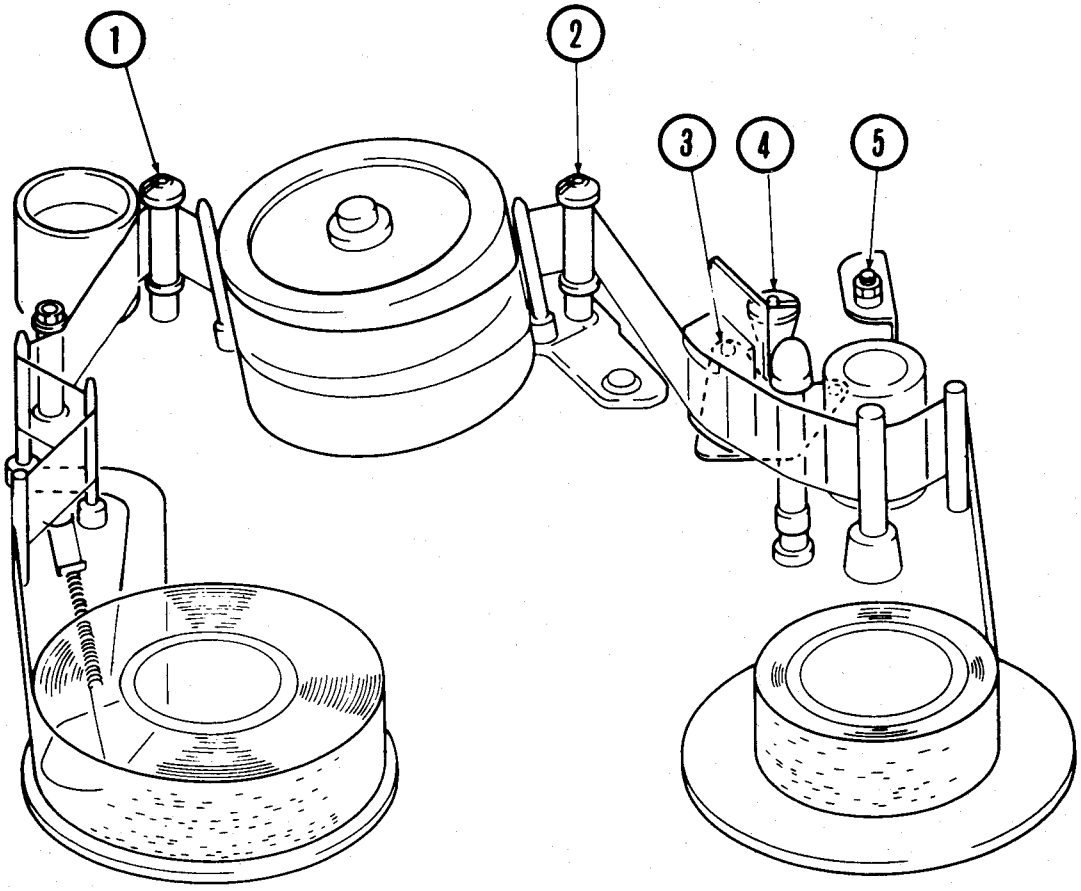


MECHANICAL ADJUSTMENT

TEST POINTS AND ALIGNMENT (VCR DECK)

VCR DECK adjustment points

① ENVELOPE entrance adjustment screw
② ENVELOPE exit adjustment screw
③ AUDIO AZIMUTH adjustment screw
④ X-Value adjustment screw
⑤ AUDIO/CTL HEAD ajustment screw



ADJUSTMENT PROCEDURES

1. ADJUSTMENT OF THE BT TORQUE (Fig. 1)

Bend the portion marked *, by suing a pair of pincers or the like, toward the direction indicated by an arrow to adjust the BT torque.

Bent toward direction Ⓐ : BT torque goes up.

Bent toward direction Ⓑ : BT torque goes down.

Caution : Do not damage the main chassis with the pincers.

Do not over–bend the portion marked *.

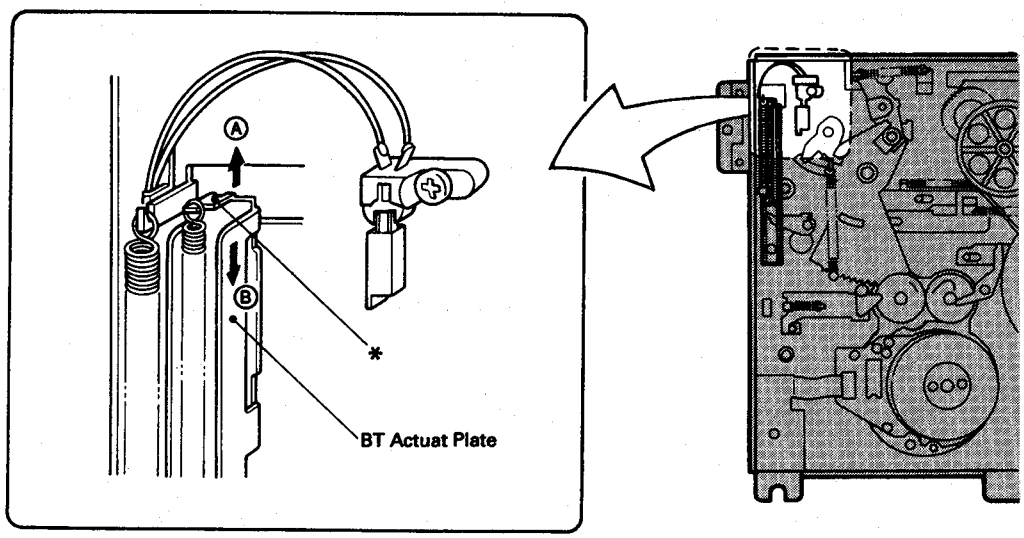


Fig. 1

2. ADJUSTMENT OF THE BT TORQUE IN THE PLAY MODE (Fig. 2)

Rotate the loading motor by finger and ftransfer to play mode while in eject status.

Next insert a screwdriver or the like into the BT band assembly's square groove and bend in direction of arrow so that BT arm assembly end is in the center of the (C) half punch as shown in the figure.

Bend in right direction: BT torque goes up (toward protruding part).

Bend in left direction: BT torque goes down (away from protruding part).

Caution : Take care to not damage the chassis during work. A slight bend angle is favorable because the square groove will not return to it's original shape if bent to an extreme angle. Refrain from using too much force.

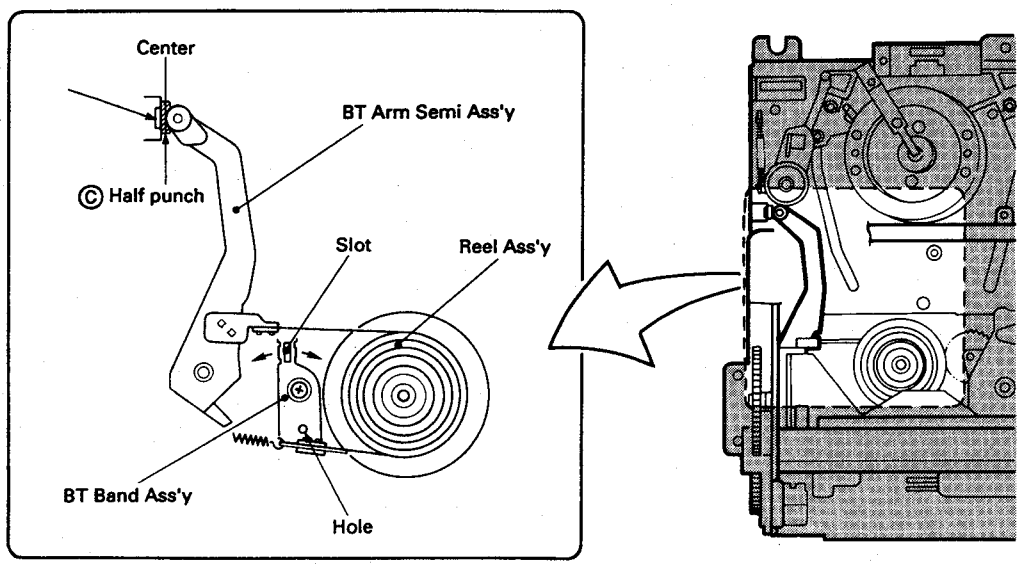


Fig. 2

3. REEL DISK HEIGHT

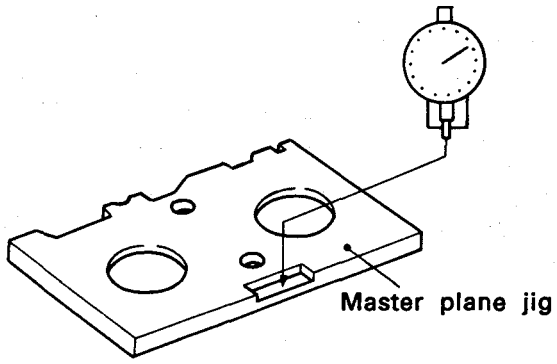


Fig.3-1 Master plane jig setting

a) Remove the front loading parts and set the master plane jig as indicated in **Fig.3-1.**

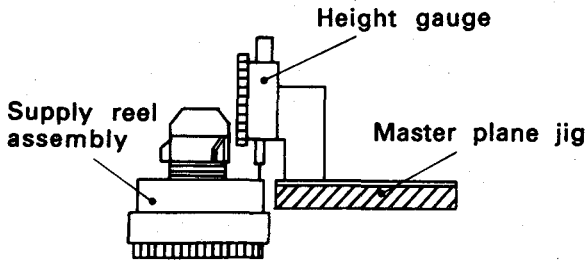


Fig.3-2 Reel height adjustment

b) Set dial gauge on the master plane.
c) Check reel assembly height measure at two places 90° apart (±0.2 mm) **Fig.3-2.**

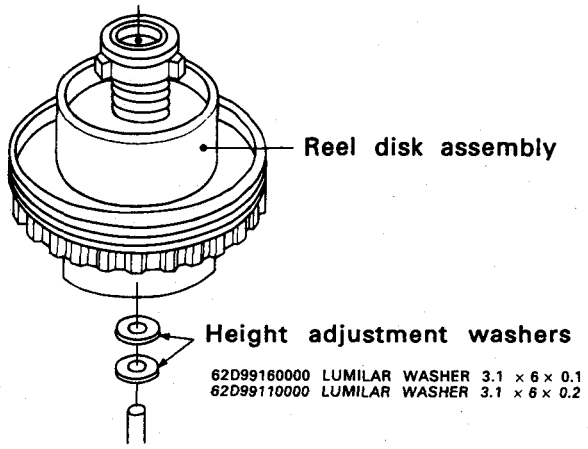

Reel disk assembly
Height adjustment washers
62D99160000 LUMILAR WASHER 3.1 x 6 x 0.1
62D99110000 LUMILAR WASHER 3.1 x 6 x 0.2

Fig.3-3 Washers for height adjustment

d) If it is necessary to adjust the height, add or subtract the required number of height adjustment washers as shown in **Fig.3-3.**

e) After reassembling, confirm a small amount of mechanical play between reel disk and slit washer.

4. GUIDE POLE HEIGHT ADJUSTMENT

a) Set the master plane jig as shown in **Fig.3-1.**

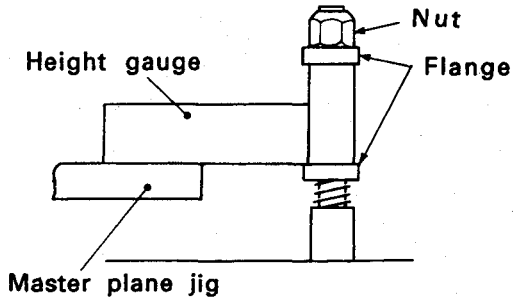


Fig.4 Guide pole height adjustment

b) Set the height gauge on the master plane jig as shown in **Fig.4.**
c) For each guide pole, check the height of the upper face of the lower flange. If necessary, carefully adjust by turning the nut.
d) If guide pole height has been adjusted, the checks and adjustments described in the following pages are required.

5. AUDIO/CTL HEAD

5-A: Tape transport adjustment

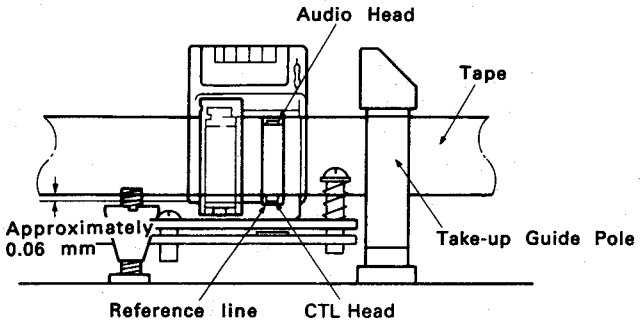


Fig.5-1 Audio/CTL Head adjustment

a) Employ self-recording tape and set for PLAY mode.
b) Turn screw © (**Fig.5-2**) and adjust for smooth transport at the take-up guide pole.

5-B: Audio/CTL Head height and azimuth

a. Connect noise meter to the audio output.
b. Play the test tape (1KHz color bar signal) and turn the nut (A) left and right in small increments to adjust the audio output level to maximum.
c. Play test tape (8 KHz stair step signal) and turn the screw (b) in small increments and adjust azimuth so that the output reaches maximum.
d. Play the test tape (1 KHz color bar signal) and double check that there is no large fluctuation in the audio output. In the case there is a large fluctuation, turn screw (c) and adjust so that the fluctuation becomes minimal.
e. When all adjustments have been completed secure screw (b) with screw lock.

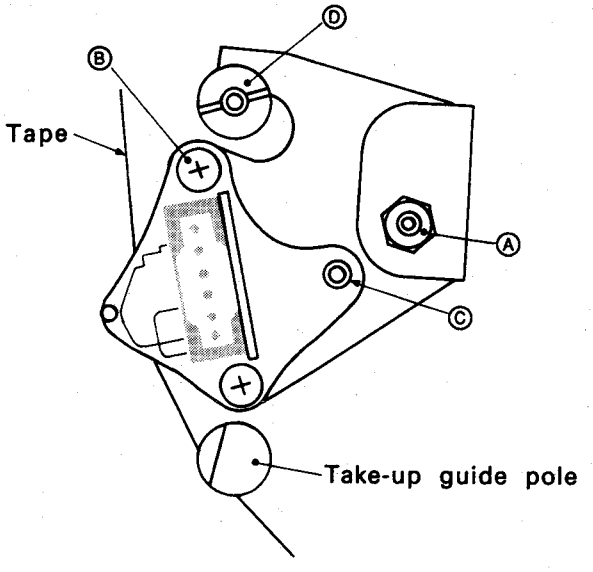


Fig. 5-2

6. TAPE TRANSPORT SYSTEM CHECKS AND ADJUSTMENT

The tape transport system has been precisely aligned at the factory and normally does not require readjustment. The following steps are therefore necessary only in cases of severe usage or when replacing parts affecting the tape transport system.

6-A: Tape transport check

a) Employ self-recording tape and operate the machine between PLAY and STOP modes several times.
b) During PLAY mode, observe tape at the input and output portions (A and B in **Fig.6-1**) of the head drum lead. Confirm that the tape slips neither upward nor downward with respect to the lead as shown in **Fig.6-2.**

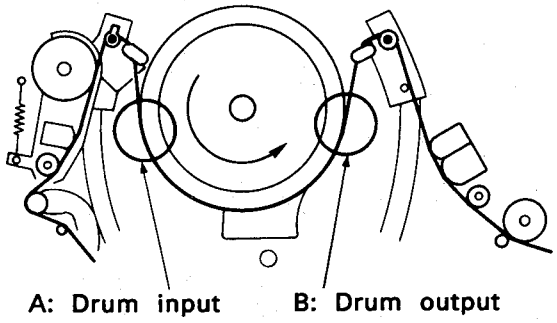


Fig.6-1 Tape transport check

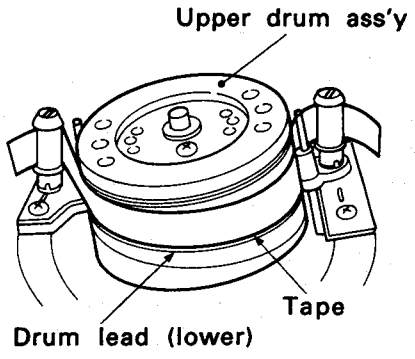


Fig.6-2 Drum lead check – 1

NOTES:

- Slips upward : sound is produced by contact between tips of rotating heads and edge of tape.
- Slips downward : tape curls or wrinkles from contacting lead face (sound may also be produced).
- During loading, play and unloading, observe the tape at the supply guide rollers and poles, and takeup guide rollers.
  Confirm absence of curling, wrinkling, etc., as shown in **Fig.6-3.**

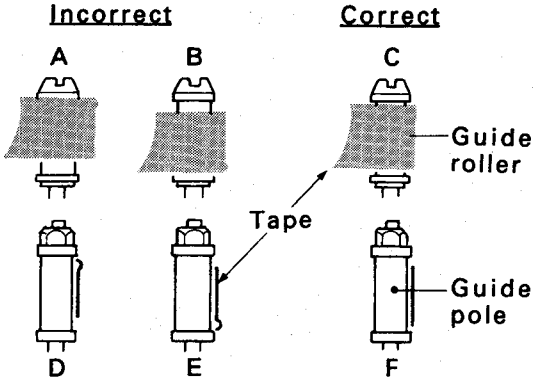


Fig.6-3 Guide roller and guide pole

- Observe the tape as it wraps around the drum during loading and as it separates from the drum during unloading.
  Confirm absence of damage to the tape at points C and D as shown in **Fig.6-4** and absence of contact noise between head tips and tape edge.

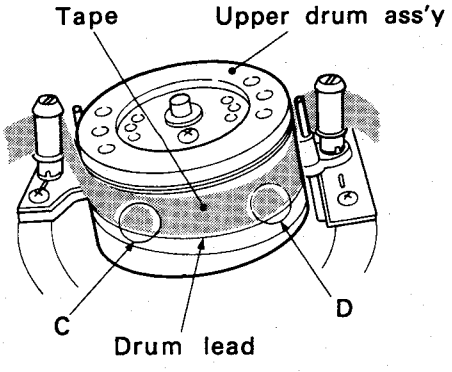


Fig.6-4 Drum lead check – 2

- If defects are noted during the above checks, perform the following adjustments 6-B, 6-C.

6–B: Guide roller height adjustment

a) Slightly loosen set screws of the supply and take-up guide rollers as shown in **Fig.6-5.**

b) Employ self-recording tape and set for PLAY mode.

c) With a slotted screwdriver, slightly turn the supply guide roller (do not turn more than 180 at a time) and adjust so that at the drum input, the tape travels smoothly in the drum lead without slipping upwards or downwards.

d) Similarly, adjust the take-up guide roller for the drum output.

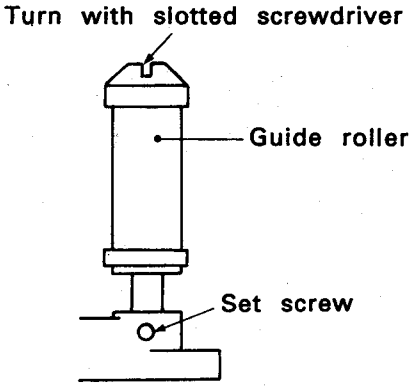


Fig.6-5 Guide roller height adjustment

NOTES:

- Loosen the set screws only enough to allow the guide rollers to be turned.
  If excessively loose, tape motion may turn the rollers inadvertently.
- After work has been completed secure fixed screw with screw lock.

6–C: Adjustment of the impedance roller

While tape is running in the reverse direction : Adjust the height of the nylon nut so that the tape guide flange does not interfere with the bottom edge of the tape.

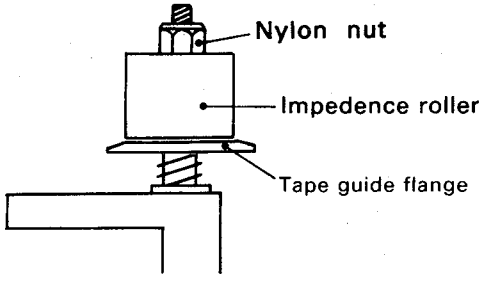


Fig.6-6 Supply guide pole height adjustment

6–D: Tape transport check at the take-up guide pole

Generally no adjustment will be necessary for the take-up guide pole. However, adjustments or checks will be needed when replacing the Audio/CTL Head or parts affecting the tape transport system after a long periods of operation.

a) Employ a self-recording tape and set for PLAY mode.

b) Turn Audio/CTL Head screw Ⓒ as shown in **Fig.6-7** and adjust for smooth transport at the take-up guide pole as shown by F of **Fig.6-3.**

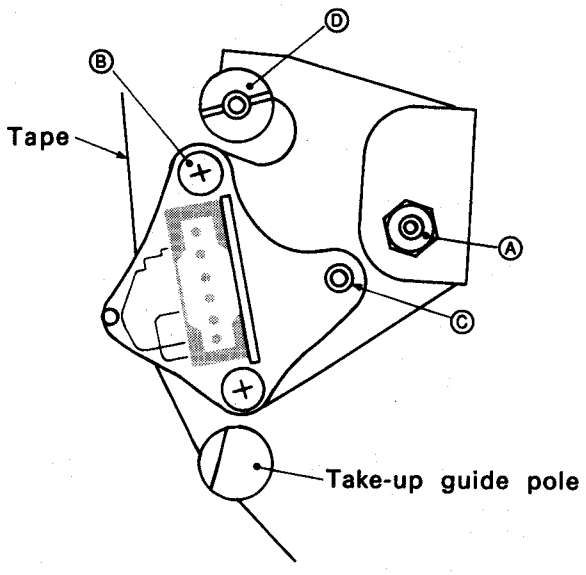


Fig.6-7 Take-up guide pole

7. INTERCHANGEABLITY ADJUSTMENT

Before using the test tape, double check that the tape play is normal with a market tape that is recordable. Also double check that switch point (P.EA-3) and tracking volume preset (P.EA-4) have been adjusted, in the event they are not, perform adjustment before carrying out the below checks.

7–A PRELIMINARY CHECKS

1. Check sequence 1

a) Connect CH-1 of oscilliscope to TP-9 (PBENV) and connect CH-2 of oscilloscope to TP-B (CTL). At this time, apply an external synchronization with the signal from TP-C (RFS) (RF switching pulse).

b) Play test tape TNS-1 (stair step).

c) Turn tracking volume and line up centering position. At this time, adjust the screw (4) (X value adjustment screw: Refer to the "Test point reference P. MA1") so that the FM envelope output reaches maximum level at TP-9 (PB ENV).

d) Turn the tracking volume and confirm the following 5-7 steps while moving the TP-B (CTL) waveform 3ms in both the + and − directions.

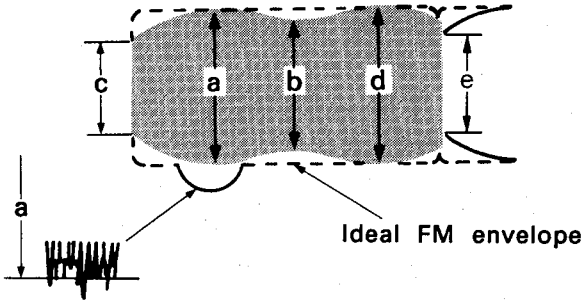


Fig.7-1 FM waveform (max. output)

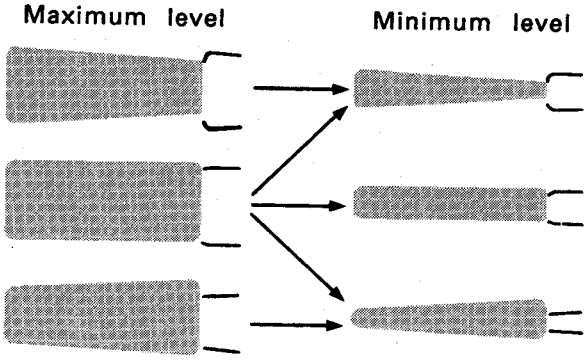


Fig.7-2 Normal waveform examples

d) Refer to **Fig.7-1**. Read the level of portion (a) of the waveform. If the waveform is serrated at point (a), read the value at the most uniform serrations as shown above in **Fig.7-2.**

e) Read the FM waveform value at point (b) and confirm that:

$$\frac{b}{a} \geqq 0.75 \text{ or } 20 \log \frac{b}{a} \geqq -2.5\text{dB}$$

f) Read the values at points (c) and (d) [drum input and output] and confirm that:

$$\frac{c}{a} \geqq 0.75 \text{ and } \frac{d}{a} \geqq 0.75 \ (\geqq -6\text{dB})$$

or, $20 \log \frac{c}{a} \geqq -2.5\text{dB}$ and

$20 \log \frac{e}{a} \geqq -2.5\text{dB}$

NOTES:
- Read minimum levels for (b), (c), and (d).
- If above checks yield normal results, proceed to section 7-B.
- If defects are noted, perform FM envelope waveform adjustments in section II.

2. FM envelope waveform adjustment

a) Observe the FM waveform as in the previous section (I-A) and turn the Tracking control. The waveform variation should be nearly parallel as shown in **Fig.16**.

b) If the waveform varies as shown in **Fig.17**, adjustment is required.

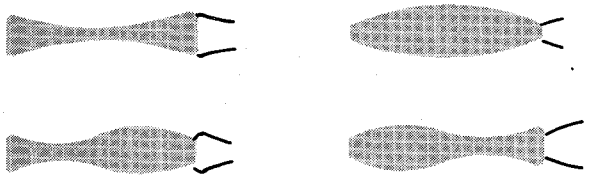


Fig.17 Incorrect waveform examples

7-B PRELIMINARY ADJUSTMENTS

- Connect CH-1 of oscilloscope to TP-9 (PBENV).
- At this time, apply an external synchronization with the signal (RF switching pulse) from PC-C (RFS).
- Playback TNS-1 test tape (stair step).

1. Drum input

a) Turn the tracking volume in the + and − direction while observing the TP-9 (PB ENV) FM envelope waveform output by oscilloscope.

b) When the waveform is abnormal as shown in figure 7-3 (A), rectify by inserting a slotted screwdriver into the groove and adjust the transport guide roller so that FM envelope waveform will flatten out.

NOTES:
- If the guide roller turns freely, tighten the set screw slightly.
- Be sure to adjust the guide roller only by small increments at a time in order to avoid damaging the alignment tape.
  In addition to observing the waveform, confirm absence of tape slippage or curling at the drum lead and guide poles.
- At the supply guide pole, if the tape separates from the guide or wrinkling occurs, adjust the guide pole height.

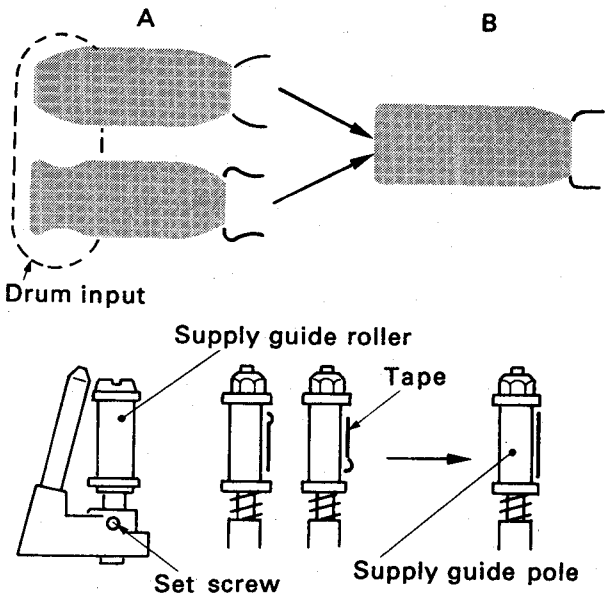


Fig.7-4 Drum input adjustment

2. Drum output

a) In the same manner as for the drum input, turn the take-up guide roller to adjust the falling portion (drum output portion) of the FM waveform.
Incorrect examples are shown by C in **Fig.7-5**, while D indicates the correct adjustment.

b) If the tape separates from the guide or wrinkling occurs at the take-up guide pole, adjust by turning screw © of the Audio/CTL Head as shown in **Fig.7-6**.

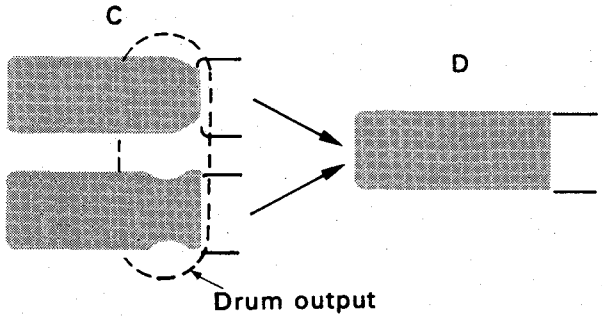


Fig.7-5 Drum output adjustment

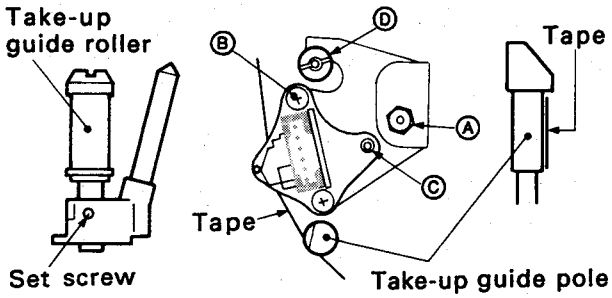


Fig.7-6 Take-up guide pole

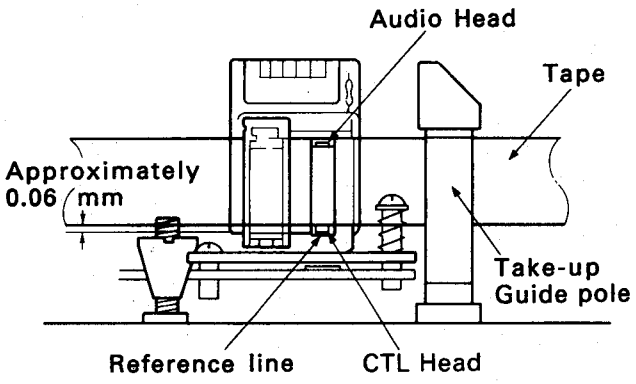


Fig.7-7 Audio/CTL Head height

c) Carefully and evenly adjust screws Ⓑ and Ⓒ, and nut Ⓐ to align the Audio/CTL Head height with the tape as shown in **Fig.21**.

NOTES:

- Fine adjustment is not required at this time. It is sufficient that the tape is engaged with the guide pole and that the servo operates properly (control signal picked up).
- If the tape separates from the take-up guide pole or wrinkling occurs, screw Ⓒ **(Fig.20)** has been turned excessively with respect to nut Ⓐ and screw Ⓑ causing the Audio/CTL Head to incline forward or backward. Use care to adjust screws Ⓑ and Ⓒ, and nut Ⓐ evenly and observe that small wrinkles are not produced at the take-up guide pole.

7-C: INTERCHANGEABILITY FINE ADJUSTMENT

a) Turn the tracking volume in the + and − directin while observing the TP-9 (PB ENV) FM envelope waveform output by oscilloscope.

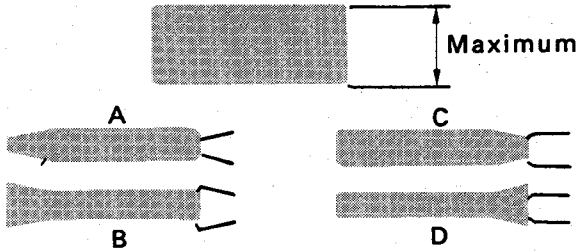


Fig.7-8 Minimum FM output (incorrect examples)

b) If there are waveforms as shown by A or B in **Fig.7-8**, carefully adjust the supply guide roller height so that the waveform appears as shown by E, F, or G in **Fig.7-9**. At this time, if the waveform fluctuates, adjust to the point of minimum fluctuation.

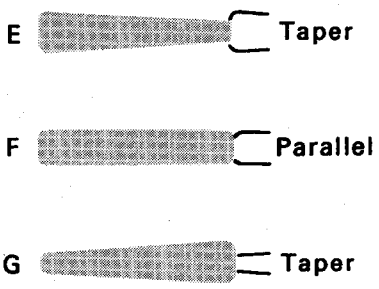


Fig.7-9 Minimum FM output (correct examples)

c) If the FM waveform appears as shown by C or D in **Fig.7-8**, carefully adjust the take-up guide roller height to obtain a waveform such as shown by E, F, or G in **Fig.7-9**.
At this time, if the waveform fluctuates, adjust to the point of minimum fluctuation.

d) Vary the Tracking control from maximum to minimum FM output.
Perform fine adjustment of supply and take-up guide rollers so that waveform variation appears as shown by E, F, or G of **Fig.7-9**.

7-D: AUDIO/CTL HEAD HEIGHT, AZIMUTH AND INCLINATION

See section 5-B (page MA-4), Audio/CTL Head height and azimuth.

7-E: SET SCREW TIGHTENING

a) Check for maximum FM output waveform, maximum audio out, and absence of tape wrinkling or other transport iregularities, then secure the guide rollers.
Perform in STOP mode.

b) Since the guide rollers are easily moved, use care when securing.

c) After tightening the set screws, again perform interchangeability final check.

7-F: INTERCHANGEABILITY FINAL CHECK

a) Confirm section 7-I, (page MA-6), Preliminary checks.

7-G: FINAL CHECKS

a) Confirm Section 7-I (page MA-6), Preliminary Checks.

8. PERIODIC MAINTENANCE

The following procedures are recommended for maintaining optimum performance and reliability of this video cassette player.

I. CLEANING

For cleaning, use a lint-free cloth or gauze dampened with alcohol.

A. Tape transport system

1. The following components should be cleaned after every 500 hours of use.
   - Impedance Roller
   - Tension Pole
   - Supply Slide Post
   - Supply Guide Roller
   - Take-Up Slide Post
   - Take-Up Guide Roller
   - Video Head & Drum System
   - Drum Ground
   - Drum Motor Shaft
   - Audio/CTL Head
   - Pinch Roller
   - Capstan
   - Reverse Guide Pole
   - Full Erase Head

2. Since the above parts come in direct contact with video tape, they tend to collect dust particles. If allowed to accumulate, dust may lead to damage to the video tape and above parts.
3. After cleaning with alcohol, allow the parts to dry thoroughly before using a cassette tape.

NOTE:
When cleaning the two video heads on the upper drum, do not clean them with a vertical stroke.
Use only a gentle back and forth motion in the direction of the tape path.
Use care since they are easily damaged.
When cleaning video heads, Audio/CTL Head, and Full Erase Head use a lint-free cloth dampened with alcohol.

B. Reel drive system

1. The following components should be cleaned after every 1000 hours of use.

TOP
- Take-Up Reel
- Supply Soft Brake
- Supply Brake
- Take-Up Brake

BOTTOM
- Capstan Motor Pulley
- Drive Belt
- Main Belt
- Loading Belt
- Capstan Flywheel
- Intermediate Pulley
- Loading Motor Pulley
- Eject Pulley
- Worm Pulley
- Clutch Ass'y

2. The above revolving parts are of rubber or come in direct contact with rubber parts. Rubber dust can accumulate and interfere with proper operation.
3. Avoid using excessive alcohol when cleaning rubber parts.

II. LUBRICATION

The following components should be lubricated with oil after every 2000 hours of use.

- Shaft of the take-up reel
- Shaft of the supply reel

After cleaning above shafts with alcohol, lubricate these shafts with one or two drops of oil. Do not overlubricate.

III. SERVICE SCHEDULE FOR MAIN COMPONENTS

The following chart lists the parts which should receive periodic servicing at the recommended intervals.

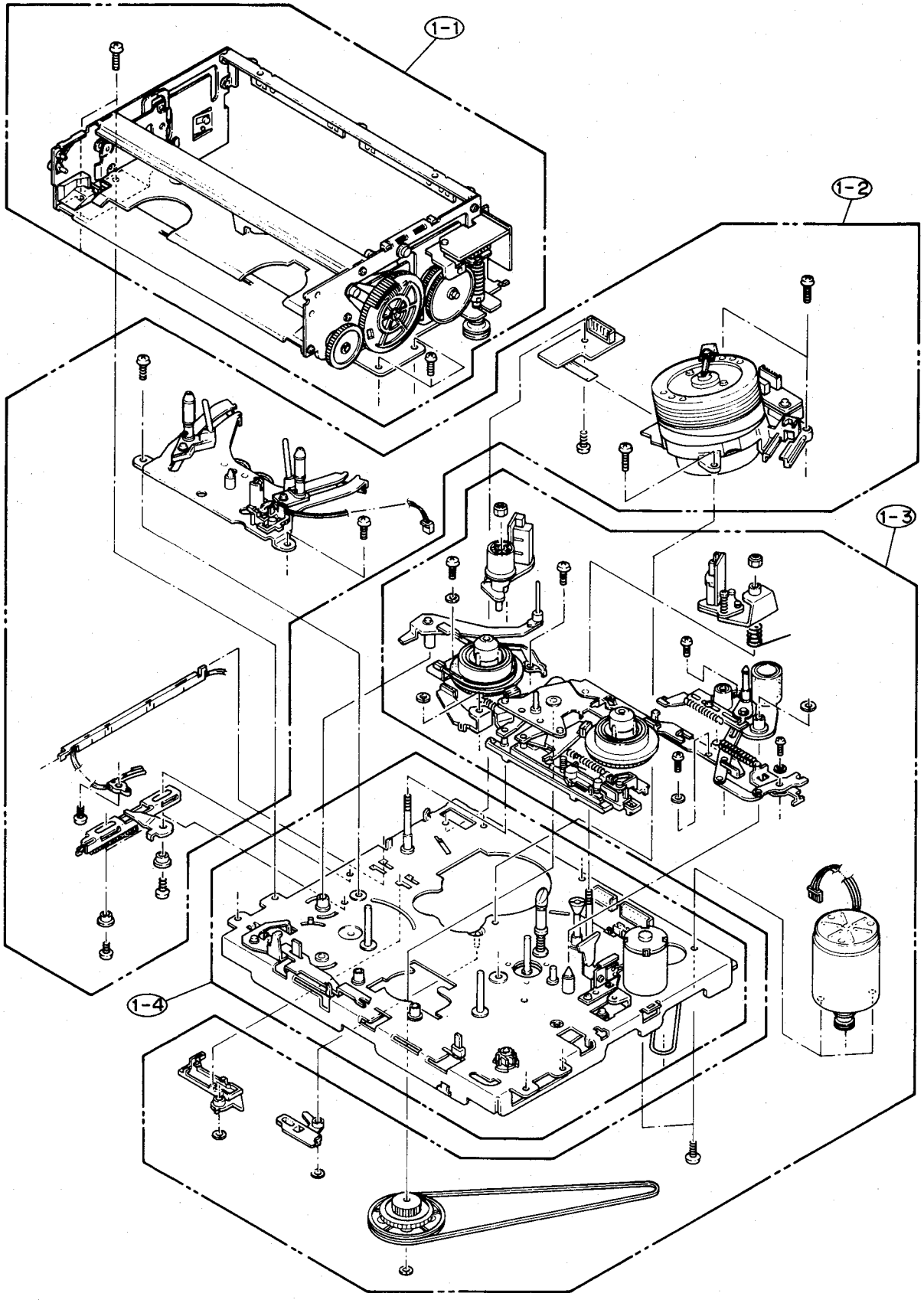
Name	Periodic Service Schedule (operating hours)					Part No.
	1000	2000	3000	4000	5000	
Upper Drum Ass'y	○	●	○	●	○	62D805901308
Drive Belt		●		●		62D80590917
Clutch Ass'y		●		●		62D805909302
Capstan motor Ass'y		●		●		62D805907302
Main Belt		●		●		62D80590710
Loading Belt		●		●		62D80591106
Back tension Band Ass'y		●		●		62D805908302
Drum Earth Braket		●		●		62D80590102
Front Loading Clutch Ass'y		●		●		62D805916305
Supply Soft Brake Ass'y		●		●		62D805910304
Supply Brake		●		●		62D80591019
Take-Up Brake		●		●		62D80591019
Audio/CTL Head			●			62D62041506
Pinch Roller			●			62D62041503
Loading Motor Ass'y			●			62D805911301
Supply Reel Ass'y			●			62D805905301
Take-Up Reel Ass'y			●			62D805905301
Full Erase Head			●			62D62041530

Fig. 26 Standard service periods

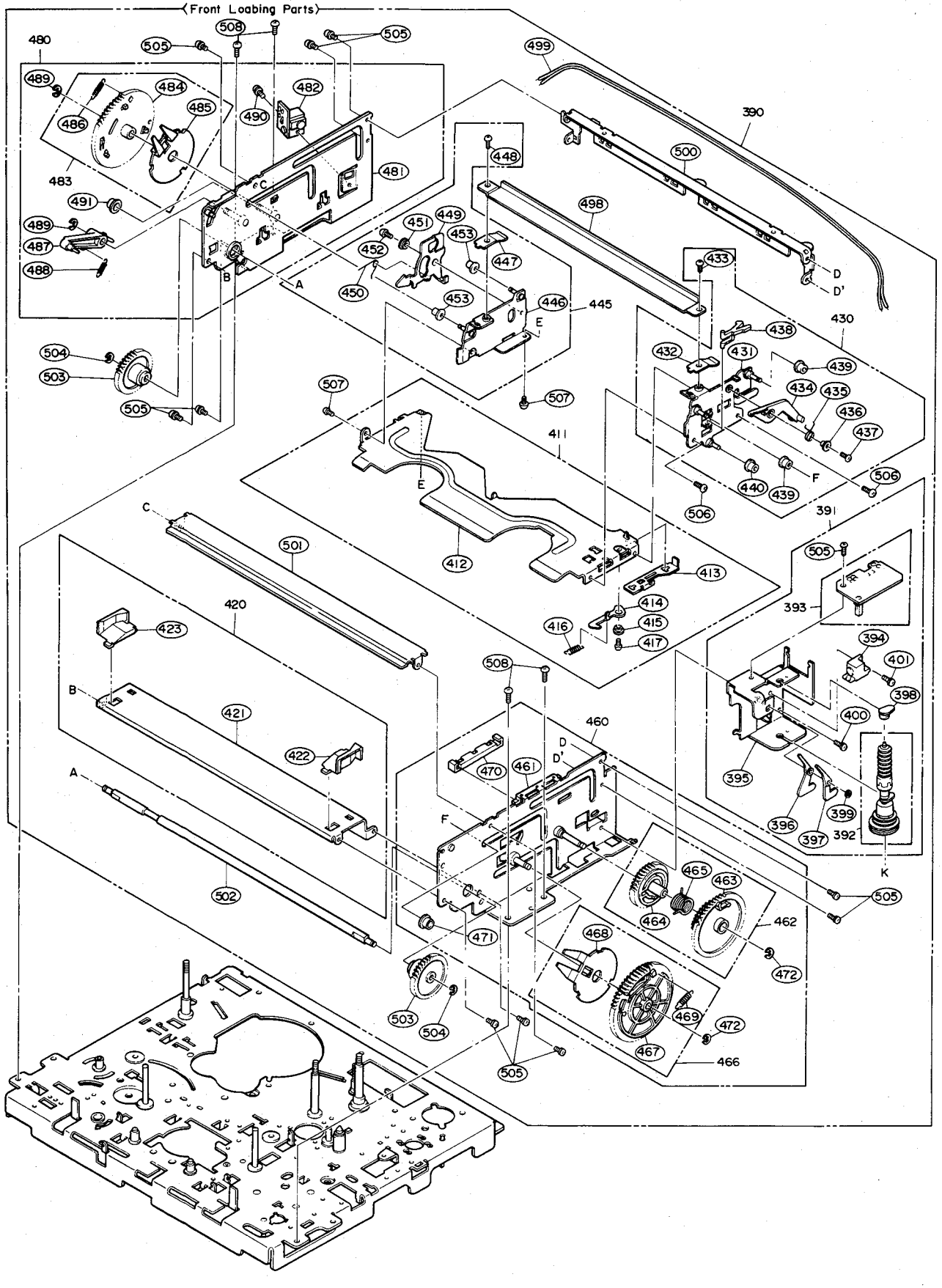
○ Check and replace if necessary
● Replace

NOTE:
Cleaning, lubrication, and replacement of the belts should be undertaken every 2 years even if the unit is not used frequently.

CASSETTE DECK EXPLODED VIEW-GENERAL



<1-1>



MECHANICAL ADJUSTMENT

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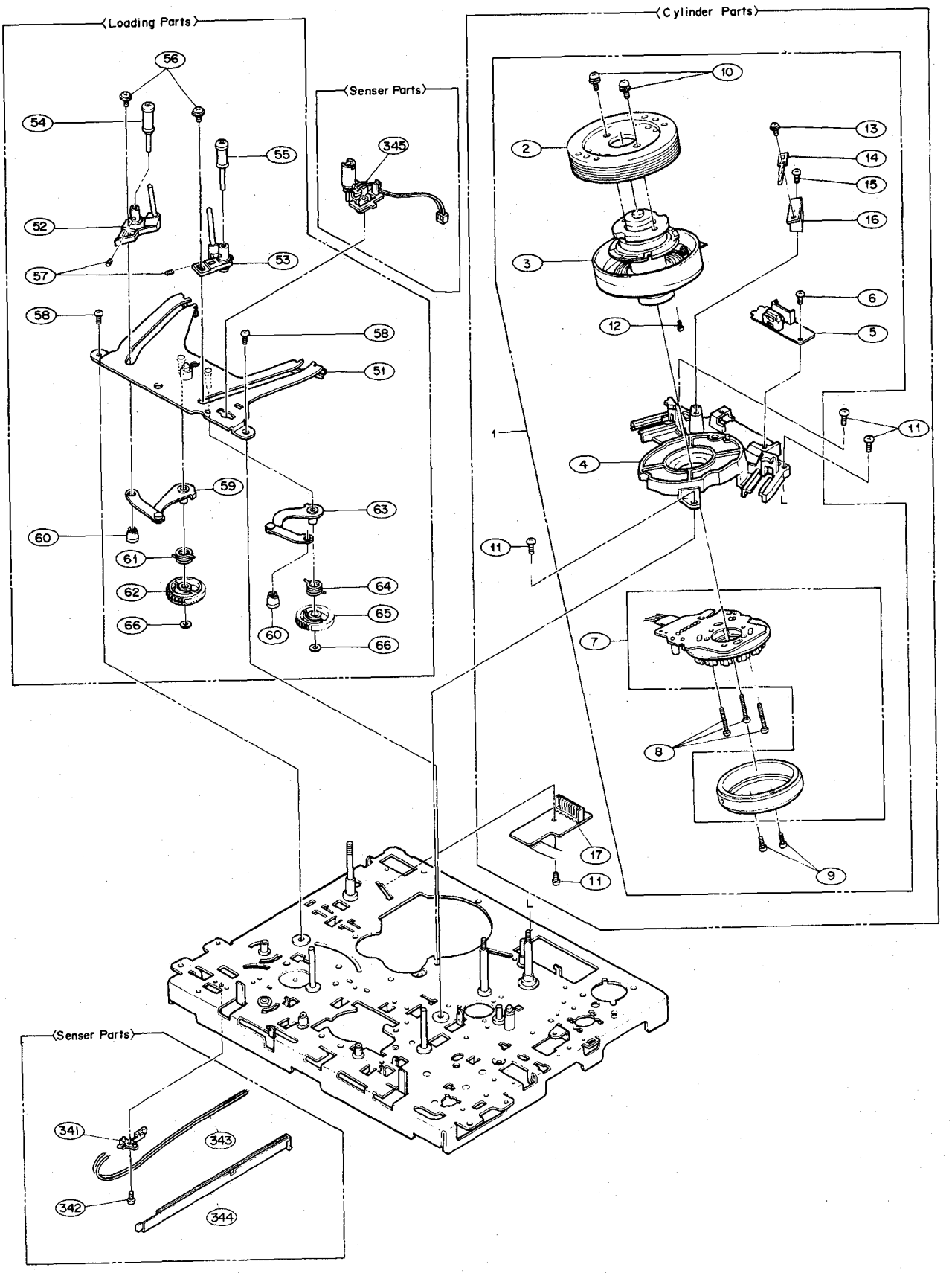
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〈Senser Parts〉
〈Cylinder Parts〉
〈Senser Parts〉
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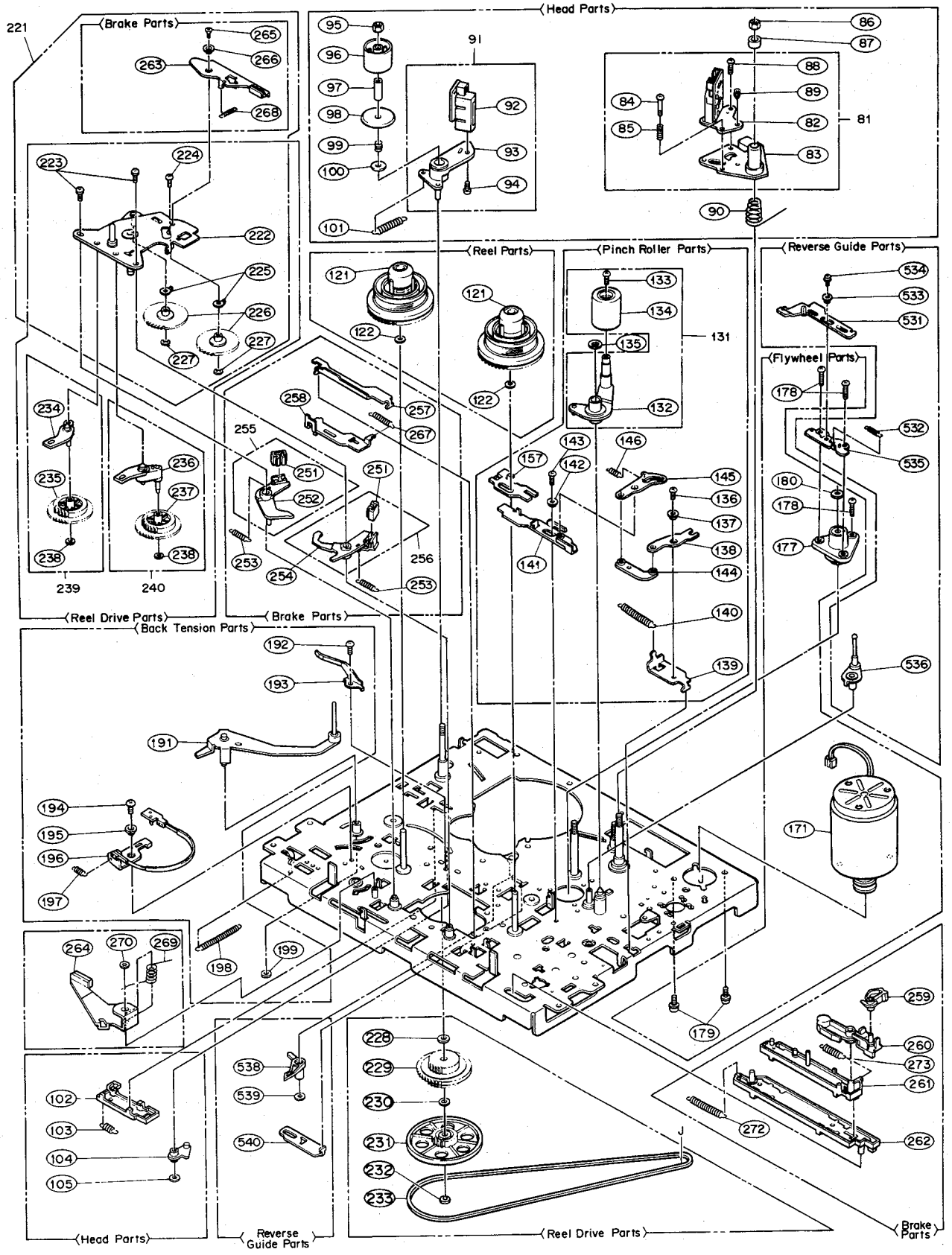
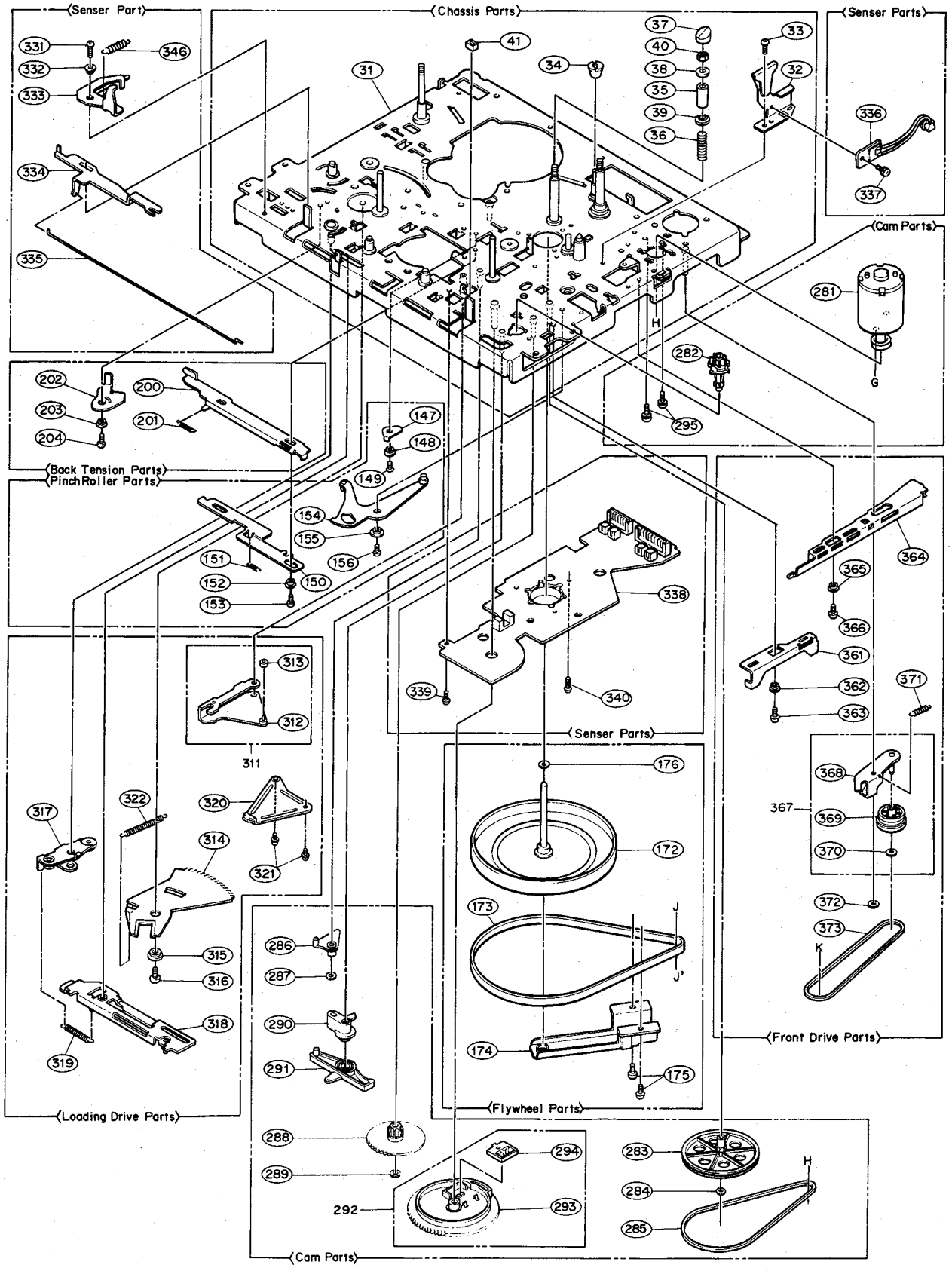


MECHANICAL ADJUSTMENT

<1-4>


〈Senser Part〉
〈Chassis Parts〉
〈Senser Parts〉
〈Cam Parts〉
〈Back Tension Parts〉
〈Pinch Roller Parts〉
〈Senser Parts〉
〈Front Drive Parts〉
〈Loading Drive Parts〉
〈Flywheel Parts〉
〈Cam Parts〉

CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
1	62D805901310	Cylinder Ass'y
2	62D80590119	Upper Drum
3	62D805901304	Lower Drum Ass'y
4	62D80590101	Cylinder Mount
5	62D805901305	Video Out P.C.B Ass'y
6	62D99730000	W Tams Screw 2.6x6
7	62D60040901	Motor TM82
8	62D90500000	Screw 2.6x20
9	62D90980000	Tams Screw 2.6x6
10	62D99720000	Bind Tams Screw 3x8
11	62D92050000	C Tapping Screw 3x10
12	62D95520000	Screw (For Camera) 2x5 (No.1)
13	62D96650000	Cup Screw 2.6x3
14	62D80590123	Drum Earth
15	62D91920000	C Tapping Screw 2.6x5
16	62D80590102	Drum Earth Bracket
17	62D805901303	DM P.C.B Ass'y
18	62D91920000	C Tapping Screw 2.6x5
20	62D97150000	Washer 2.6
31	62D805902501	Chassis Semi Ass'y
32	62D805902301	Open Angle Ass'y
33	62D91910000	C Tapping Screw 2.6x4
34	62D80000316	Tracking Adjuster
35	62D80000314	Tape Guide
36	62D80590226	Tape Guide Spring
37	62D80000319	Guide Cap
38	62D80590328	Tape Guide Flange (C)
39	62D80590225	Tape Guide Flange (F)
40	62D94530000	Nut 3.0
41	62D80590223	Dumper Rubber
51	62D805903501	Loading Base Semi Ass'y
52	62D80590304	Loading Block (L)
53	62D80590305	Loading Block (R)
54	62D80000333	Roller Post SIS
56	62D96650000	Cup Screw 2.6x3
57	62D95500000	Screw (For Camera) 2X3
58	62D91920000	C Tapping Screw 2.6x5
59	62D805903502	Loading Plate (L) Semi Ass'y
60	62D80590314	Loading Boss
61	62D80590308	Loading Gear Spring (L)
62	62D80590306	T Loading Gear (L)
63	62D805903503	Loading Plate (R) Semi Ass'y
64	62D80590309	Loading Gear Spring (R)
65	62D80590307	T Loading Gear (R)

CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
66	62D98840000	P Washer Cut 2.6x6x0.5
81	62D805904303	Head Base Ass'y
82	62D62041506	ACE Head HV225211
83	62D80590501	Head Base
84	62D80000626	Azimuth Spring Screw
85	62D80000604	Azimuth Spring
86	62D99530000	Nylon Nut M3
87	62D80590403	Adjust Collar
88	62D90410000	Screw 2.6x7
89	62D99500000	Set Screw 3x5 (Shape Type)
90	62D80590415	Head Spring
91	62D805904302	FE Plate Ass'y
92	62D62041503	FE Head HVFMD0006
93	62D80590404	FE Plate
94	62D91140000	Flange Bind Screw 2x3
95	62D99530000	Nylon Nut M3
96	62D80590405	Impedance Roller
97	62D80590406	Impedance Roller Sleeve
98	62D80590407	Tape Guide Flange (A)
99	62D80590409	Tape Guide Flange Spring
100	62D93370000	Plane Washer 3x8x0.5
101	62D80590408	FE Plate Spring
102	62D80590410	FE Slide Plate
103	62D80590412	FE Actuate Spring
104	62D80590411	FE Actuate Lever
105	62D98760000	P Washer Cut 2.1x5x0.5
121	62D805905301	Reel Ass'y
122	62D99120000	R Washer 3.1x6x0.5
131	62D805906301	Pinch Roller Arm Ass'y
132	62D805906501	Pinch Roller Arm Semi Ass'y
133	62D90380000	Screw 2.6x4
134	62D80000922	Pinch Roller (A)
135	62D99990311	P Washer Cut 5x8x0.5
136	62D90960000	Tams Screw 2.6x4
137	62D80590618	Collar
138	62D80590605	P Actuate Angle
139	62D80590619	P Angle Holder
140	62D80590620	P Roller Spring
141	62D80590624	P Slide Plate A
142	62D80590618	Collar
143	62D91920000	C Tapping Screw 2.6x5
144	62D80590606	Joint Plate
145	62D80590604	P Actuate Arm
146	62D80590609	P Actuate Arm Spring

CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
147	62D80590612	P Crank
148	62D80590613	P Crank Collar
149	62D99991810	C Tapping FH Screw (For Camera) 2.6x4
150	62D80590610	P Slider
151	62D80590623	P Slider Spring
152	62D80590611	P Slider Collar
153	62D91920000	C Tapping Screw 2.6x5
154	62D805906502	P Cam Lever Semi Ass'y
155	62D80590617	P Cam Lever Collar
156	62D91920000	C Tapping Screw 2.6x5
157	62D80590625	P Slide Plate B
171	62D805907302	Capstan Motor Ass'y
172	62D80590714	Flywheel Capstan
173	62D80590710	Main Belt
174	62D805907303	FL Angle Ass'y
175	62D92020000	C Tapping Screw 3x5
176	62D99120000	R Washer 3.1x6x0.5
177	62D805907301	Metal Housing Ass'y
178	62D91950000	C Tapping Screw 2.6x8
179	62D91050000	Tams Screw 3x4
180	62D99990603	Nylon Washer 2.92X5X0.5
191	62D805908501	BT Arm Semi Ass'y
192	62D91910000	C Tapping Screw 2.6x4
193	62D80590809	Back Tension Support
194	62D91910000	C Tapping Screw 2.6x4
195	62D80590815	Band Holder Collar
196	62D805908302	BT Band Ass'y
197	62D80590817	Band Holder Spring
198	62D80590813	Back Tension Spring
199	62D99990315	P Washer Cut 2.1x4x0.5
200	62D80590810	BT Change Plate
202	62D80590823	BT Return Lever
203	62D80590618	Collar
204	62D91920000	C Tapping Screw 2.6x5
205	62D80590819	BT Actuate Plate
206	62D80590818	BT Actuate Lever
207	62D80590821	BT Actuate Plate Collar
208	62D80590820	BT Actuate Plate Spring
209	62D80590618	Collar
210	62D98400000	S Tapping Screw (for Camera) 2.6x3.5
211	62D91920000	C Tapping Screw 2.6x5
221	62D805909307	Sub Plate Ass'y
222	62D805909501	Sub Plate Semi Ass'y
223	62D90770000	Tams Screw 2x4

CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
224	62D91920000	C Tapping Screw 2.6x5
225	62D80001025	Wave Washer
226	62D80590906	Reel Drive Gear
227	62D95000000	E Ring S1.5
228	62D98530000	Nylon Washer 3.1x6x0.3
229	62D805909302	Clutch Ass'y
230	62D99990604	Nylon Washer 2.98x6x0.3
231	62D805909301	Middle Pulley Ass'y
232	62D98840000	P Washer Cut 2.6x6x0.5
233	62D80590917	Drive Belt
234	62D805909303	P Gear Arm Ass'y
235	62D80590920	Play Gear
236	62D805909304	RF Gear Arm Ass'y
237	62D80590922	FF Gear
238	62D97430000	P Washer Cut 1.6x3.8x0.3
239	62D805909305	P Gear Ass'y
240	62D805909306	RF Gear Ass'y
251	62D80591019	Brake Shue
252	62D80591001	S Brake Arm
253	62D80591002	Brake Arm Spring
254	62D80591003	T Brake Arm
255	62D805910301	S Brake Arm Ass'y
256	62D805910302	T Brake Arm Ass'y
257	62D80591016	Brake Lifter
258	62D80591017	L Brake Actuator
259	62D80591014	Trigger Hook
260	62D80591013	Trigger Lever
261	62D80591011	Brake Plate
262	62D80591009	Brake Actuate Base
263	62D805910303	T Soft Brake Ass'y
264	62D805910304	S Soft Brake Ass'y
265	62D99740000	SL FH Screw (For Camera) 2x3
266	62D80591007	T Soft Brake Arm Collar
267	62D80591018	L Brake Actuator Spring
268	62D80591006	T Soft Brake Arm Spring
269	62D80591022	S Soft Brake Spring
270	62D98760000	P Washer Cut 2.1x5x0.5
271	62D80591023	Trigger Lever Spring
272	62D80591010	Brake Actuate Base Spring
273	62D80591012	Brake Plate Spring
281	62D805911301	LM Ass'y
282	62D805911302	Trigger Bearing Ass'y
283	62D80591103	Loading Pulley
284	62D97430000	P Washer Cut 1.6x3.8x0.3

CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
285	62D80591106	Loading Belt
286	62D80591112	Search Arm (B)
287	62D98840000	P Washer Cut 2.6x6x0.5
288	62D80591104	Loading Gear
289	62D98760000	P Washer Cut 2.1x5x0.5
290	62D80591113	Brake Actuate Arm
291	62D80591114	Eject Arm
292	62D805911303	Loading Cam Ass'y
293	62D80591101	Loading Cam
294	62D80591102	S Brush
295	62D91050000	Tams Screw 3X4
296	62D99990310	P Washer 2.6x8x0.5
311	62D805912301	Loading Lever Ass'y
312	62D805912501	Loading Lever Semi Ass'y
313	62D80591213	Cam Roller
314	62D80591209	L Gear Plate
315	62D80591210	L Gear Plate Collar
316	62D92030000	C Tapping Screw 3x6
317	62D805912502	Loading Actuate Lever Semi Ass'y
318	62D805912503	Loading Actuator Semi Ass'y
319	62D80591205	Loading Actuator Spring
320	62D80591211	Loading Lever Reinforce Plate
321	62D90780000	Tams Screw 2x5
322	62D80591212	L Gear Plate Spring
331	62D91920000	C Tapping Screw 2.6x5
332	62D80590618	Collar
333	62D80591306	REC Lever
334	62D80591307	REC Actuator
335	62D80591311	REC Actuate Spoke
336	62D68080804	DEW Senser EYH-S10R
337	62D90960000	Tams Screw 2.6x4
338	62D805913302	Base Plate Ass'y
339	62D96910000	S Tapping Screw (For Camera) 2.6x5
340	62D91920000	C Tapping Screw 2.6x5
341	62D640101177	Leaf Switch MCV-00321MVDO
342	62D91920000	C Tapping Screw 2.6x5
343	62D80591308	Wire
344	62D80591310	Wire Holder
345	62D805913303	Lamp Ass'y
346	62D80591314	Rec Lever Spring
361	62D80591508	Eject Actuator
362	62D80590618	Collar
363	62D91920000	C Tapping Screw 2.6x5
364	62D80591507	L Brake Plate

CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
365	62D80590618	Collar
366	62D91920000	C Tapping Screw 2.6x5
367	62D805915303	E Idler Arm Ass'y
368	62D805915502	E Idler Arm Semi Ass'y
369	62D80591515	Eject Pulley
370	62D97430000	P Washer Cut 1.6X3.8X0.3
371	62D80591511	Idler Arm Spring
372	62D98760000	P Washer Cut 2.1x5x0.5
373	62D80591506	FL Belt
390	62D805916303	Front Loading Ass'y
391	62D805916304	C Road Bracket Ass'y
392	62D805916305	F Loading Clutch Ass'y
393	62D805916302	FL P.C.B Ass'y
394	62D805916316	Senser P.C.B RM Ass'y
395	62D805916501	C Road Bracket Semi Ass'y
396	62D80002228	SW Lever (A)
397	62D80002229	SW Lever (B)
398	62D80591606	F Worm Bearing (A)
399	62D97430000	P Washer Cut 1.6x3.8x0.3
400	62D90960000	Tams Screw 2.6x4
401	62D90780000	Tams Screw 2x5
411	62D805916306	Cassette Holder Ass'y
412	62D80002203	Cassette Holder
413	62D80002213	Slide Plate
414	62D80002212	C Lock Plate (A)
415	62D80590618	Collar
416	62D80591629	Lock Spring
417	62D99680000	SL Screw (For Camera) 2.6x3
420	62D805916307	Front Angle Ass'y
421	62D80591618	Front Angle
422	62D80591625	Tape Guide (R)
423	62D80591624	Tape Guide (L)
430	62D805916308	Side Plate (R) Ass'y
431	62D805916502	Side Plate (R) Semi Ass'y
432	62D80591628	Cassette Push Plate
433	62D98330000	Screw (For Camera) 2.3x2
434	62D80002225	Open Lever
435	62D80002244	Open Lever Spring
436	62D80002242	Open Lever Collar
437	62D99670000	SL Screw (For Camera) 2x4
438	62D80002216	Lock Release Lever
439	62D80002275	Guide Roller
440	62D80002223	Guide Roller
445	62D805916309	Side Plate (L) Ass'y

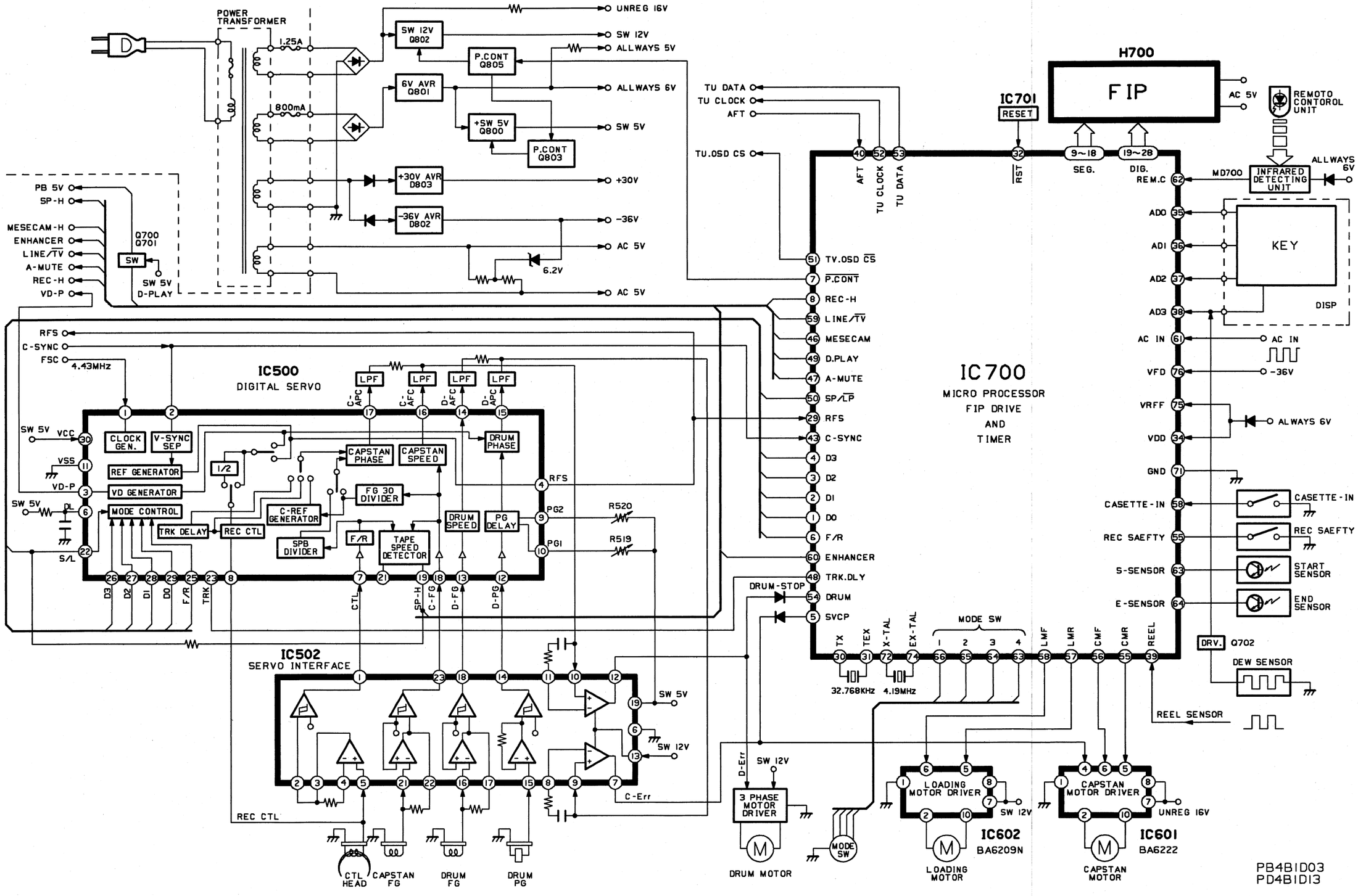
CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
446	62D805916503	Side Plate (L) Semi Ass'y
447	62D80591628	Cassette Push Plate
448	62D98330000	Screw (For Camera) 2.3x2
449	62D80002266	C Lock Plate (L)
450	62D80591630	Lock Plate Spring (L)
451	62D80001963	Lock Plate Collar
452	62D99660000	SL Screw (For Camera) 2x2.5
453	62D80002275	Guide Roller
460	62D805916310	Frame (R) Ass'y
461	62D805916504	Frame (R) Semi Ass'y
462	62D805916311	Worm Wheel Ass'y
463	62D80591620	Worm Wheel
464	62D80591623	Friction Gear
465	62D80591631	Friction Spring
466	62D805916312	Lift Gear (R) Ass'y
467	62D80592215	Lift Gear (R)
468	62D80002211	Lift Arm
469	62D80002245	LP Spring
470	62D80002226	Open Lever Guide
471	62D80002224	Guide Sleeve
472	62D95040000	E Ring S2.5
480	62D805916313	Frame (L) Ass'y
481	62D805916505	Frame (L) Semi Ass'y
482	62D805916301	Senser P.C.B (LM) Ass'y
483	62D805916314	Lift Gear (L) Ass'y
484	62D80592214	Lift Gear (L)
485	62D80002211	Lift Arm
486	62D80002245	LP Spring
487	62D80002276	Lift Lever
488	62D80002247	Lift Lever Spring
489	62D95040000	E Ring S2.5
490	62D90990000	Tams Screw 2.6x7
491	62D80002224	Guide Sleeve
498	62D80002265	Top Stay
499	62D80591619	End Senser Wire
500	62D80591609	Rear Angle
501	62D80002207	Upper Plate
502	62D80001660	Synchronize Shaft
503	62D80591617	Synchronize Gear (A)
504	62D95040000	E Ring S2.5
505	62D90960000	Tams Screw 2.6x4
506	62D95560000	Screw (For Camera) 2.6x3
507	62D99910000	Screw (For Camera) 2.3x2.5 (No.3)
508	62D91920000	C Tapping Screw 2.6x5

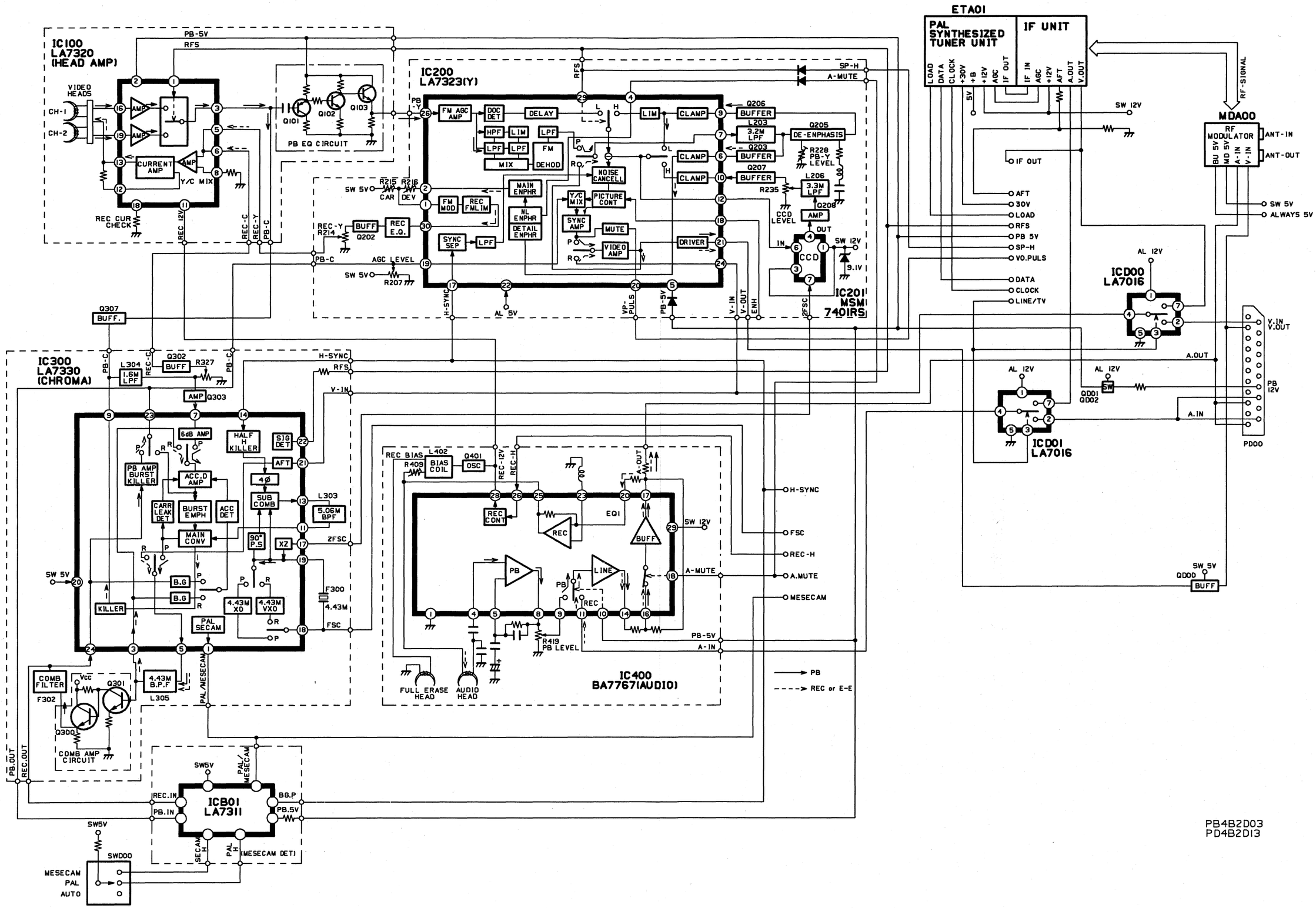
CASSETTE DECK MECHANISM 59216

Ref. No.	Part No.	Description
531	62D80591703	RG Slide Plate
532	62D80591711	RG Slide Spring
533	62D80591710	RG Slide Plate Collar
534	62D90770000	Tams Screw 2x4
535	62D80591709	RG Slide Base
536	62D805917501	RG Arm Semi Ass'y
537	62D98840000	P Washer Cut 2.6x6x0.5
538	62D80591701	RG Actuate Arm
539	62D98760000	P Washer Cut 2.1x5x0.5
540	62D80591702	RG Actuator

1. BLOCK DIAGRAM (MAIN & REG)



BLOCK DIAGRAM (MOTHER & HEAD AMP)



PB4B2D03
PD4B2D13

2. TERMINOLOGY CHANGES

The following terms have been changed as a result of the use of a new CAD system.

Description	Parts No.	CAD Code
◆ IC	IC101	LA3373, MT No Connection Description (LA3373) Circuit Parts Number Head Name
◆ Transistor	Q101	2SC2785T. E.F Rank No Connection Description (2SC2785) Circuit Parts number Head Name
◆ Diode	D101	1S2835T No Connection Description (1S2835) Circuit Parts Number Head Name
◆ Resistor	R101	RC102F Tolerance F: ± 1% G: ± 2% J: ± 5% (No Mark) K: ± 10% M: ± 20% H: No Connection Resistance (10 × 10² = 1000 ohm) Carbon Resistor 1/6W Circuit Parts Number Head Name
	R102	RA1R1 Resistance (1.1 ohm) Decimal Point Mark Chip Resistor 2125 Type 1/10W
◆ Capacitor (Chip)	C101	CA200C Temperature Characteristic C: CH, CJ, CK U: UJ S: SL B: B D: D Capacity (20 × 10⁰ = 20pF) Chip Capacitor 2125 Type Circuit Parts Number Head Name
◆ Capacitor (Ceramic)	C101	SL1R5H or S or Z No Connection Capacity (1.5pF) Decimal Point Mark Characteristic (Ceramic SL)
◆ Capacitor (Electrolytic)	C101	ES1/50H or F or Z No Connection Voltage Proof (50V) Capacity (1 μF) Electrolytic SSM Type
◆ Hybrid IC	IC102	HIC****** Code No. (3~8 Column→11******0)
◆ CR Component	CR101	CR****** Code No. (3~8 Column→11******0)
◆ In-Line Block	IB101	IB****** Code No. (3~8 Column→11******0)
◆ Surge Absorber	D102	Z****** Code No. (3~8 Column→13******0)
◆ LED	LD101	LED****** Code No. (3~8 Column→14******0)
◆ LCD	H101	LCD****** Code No. (3~8 Column→14******0)
◆ FIP	H102	FIP****** Code No. (3~8 Column→14******0)
◆ Pilot Lamp	PL101	PL****** Code No. (3~8 Column→14******0)
◆ Neon Bulb	NE101	NE****** Code No. (3~8 Column→14******0)
◆ Trimmer Cap.	C102	CT****** Code No. (5~9 Column→1591*****)
◆ CFC Assy	C103	CFC****** Code No. (5~9 Column→1501*****)
◆ Coil	L101	L****** Code No. (3~8 Column→17******0)
◆ Filter	F101	F****** Code No. (3~8 Column→17******0)

Description	Type	Capacity Limit	No Marked Tolerance
Chip	CK, CJ, CH, UJ CH, UJ CH, SL SL, B D	1PF~5PF 6PF~10PF 12PF~470PF 680PF~0.022μF 0.033μF~0.1μF	C (±0.25PF) D (±0.5PF) J (±5%) K (±10%) M (±20%)
Ceramic	 General B	1PF~5PF 6PF~10PF 12PF~270PF 100PF~680PF	C D J K
Semi-Conductor	SR BC	0.001μF~0.068μF 0.1μF~0.2μF	K Z (−20%~+80%)
Mylar (M)		0.001μF~0.1μF	J
TF		0.1μF~0.47μF	J
PS, NPS		470PF~1000PF	G (±2%), J
ALSICON (AS)		0.1μF~0.22μF	M
Tantalum (TA)		0.15μF~10μF	M
Electrolytic	General	0.1μF~220μF	M

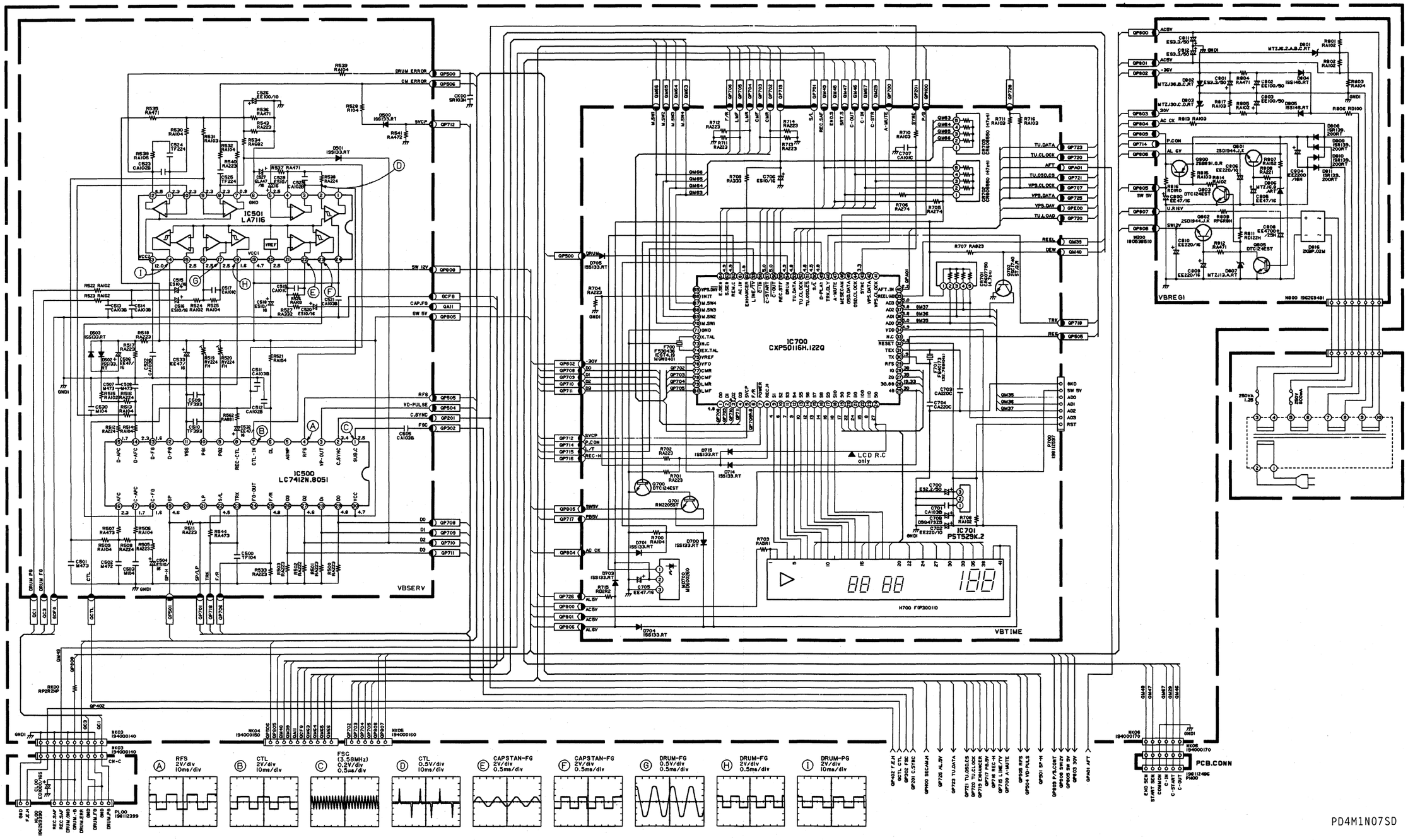
Head	Description	Head	Description
ET	Electrolytic Tuner	NE	Neon Bulb
MT	Manual Tuner	PL	Pilot Lamp
PT	Push Button Tuner	C*	Capacitor
K	Relay	R**	Resistor
MC	Microphone	L	Transformer
SP	Speaker	L	Coil, Inductor
IC	IC, Hybrid IC	F	Ceramic Filter, Crystal
IB	In-Line Block	W	Printed Circuit Board
CR	CR Component	BL	Block PC Ass'y
Q	Transistor	P	Conenctor Post
D	Diode, Surge Absorber	TP	Check Pin
LD	LED	AJ	Antenna Jack
H	LCD	SW	Switch
H	FIP	VR	Volume

CAD Code	*Capacitor
CA****	Chip Capacitor 2125 Type
CB****	Chip Capacitor 3216 Type
SL***	Ceramic Capacitor SL Type
B***	Ceramic Capacitor B Type
F***	Ceramic Capacitor F Type
CH***	Ceramic Capacitor CH Type
LH***	Ceramic Capacitor LH Type
PH***	Ceramic Capacitor PH Type
RH***	Ceramic Capacitor RH Type
SH***	Ceramic Capacitor SH Type
TH***	Ceramic Capacitor TH Type
UJ***	Ceramic Capacitor UJ Type
SR***	Semi-Conductor Cap. SR Type
BC***	Semi-Conductor Cap. BC Type
M***	Mylar Capacitor
TF***	TF Capacitor
NP***	NPS Capacitor
AS**/**	ALSICON Capacitor
TA**/**	Tantalum Capacitor
ES**/**	Electrolytic Cap. SSM Type
ESL**/**	Electrolytic Cap. SSM-L Type
ESH**/**	Electrolytic Cap. SSM-H Type
ESB**/**	Electrolytic Cap. Bi-Polar
EG**/**	Electrolytic Cap. GSM Type
EE**/**	Electrolytic Cap. SEM Type

CAD Code	*Capacitor
EA**/**	Electrolytic Cap. Aibis Type
EL**/**	Electrolytic Cap. LSM Type
EH**/**	Electrolytic Cap. HPW Type
CT*****	Trimmer Capacitor

CAD Code	**Resistor
RA***	Chip Resistor 2125 Type
RB***	Chip Resistor 3216 Type
RC***	Carbon Resistor 1/6W S Type
RD***	Carbon Resistor 1/4W U Type
RU***	Carbon Resistor 1/6W U Type
RF***	Carbon Resistor 1/2W S Type
RK***F	Metal Film Resistor 1/4W S ±1%
RL***F	Metal Film Resistor 1/6W S ±1%
RP***	Metal Oxide Resistor 1W S Type
RQ***	Metal Oxide Resistor 2W S Type
RM***	Cement-Resistor 5W S Type
RV***	Variable Resistor Vertical Type 6 φ
RV***A	Variable Resistor Vertical Metal 6 φ
RV***B	Variable Resistor Down Type 6 φ
RV***C	Variable Resistor Vertical 6 φ 4 pin
PR***	Printed Resistor (on PC Board)

3. SCHEMATIC DIAGRAM (MAIN-1 & REG)



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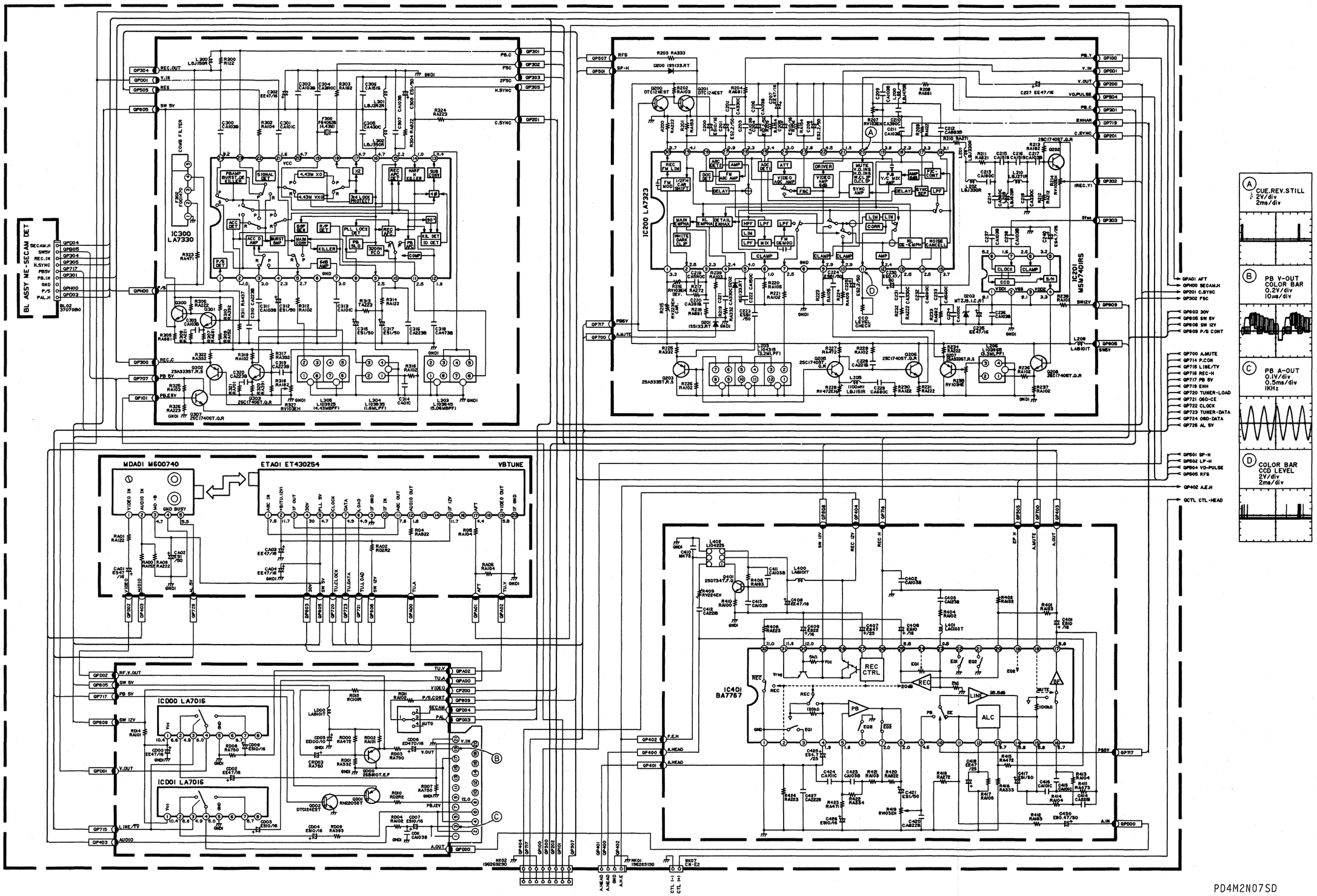
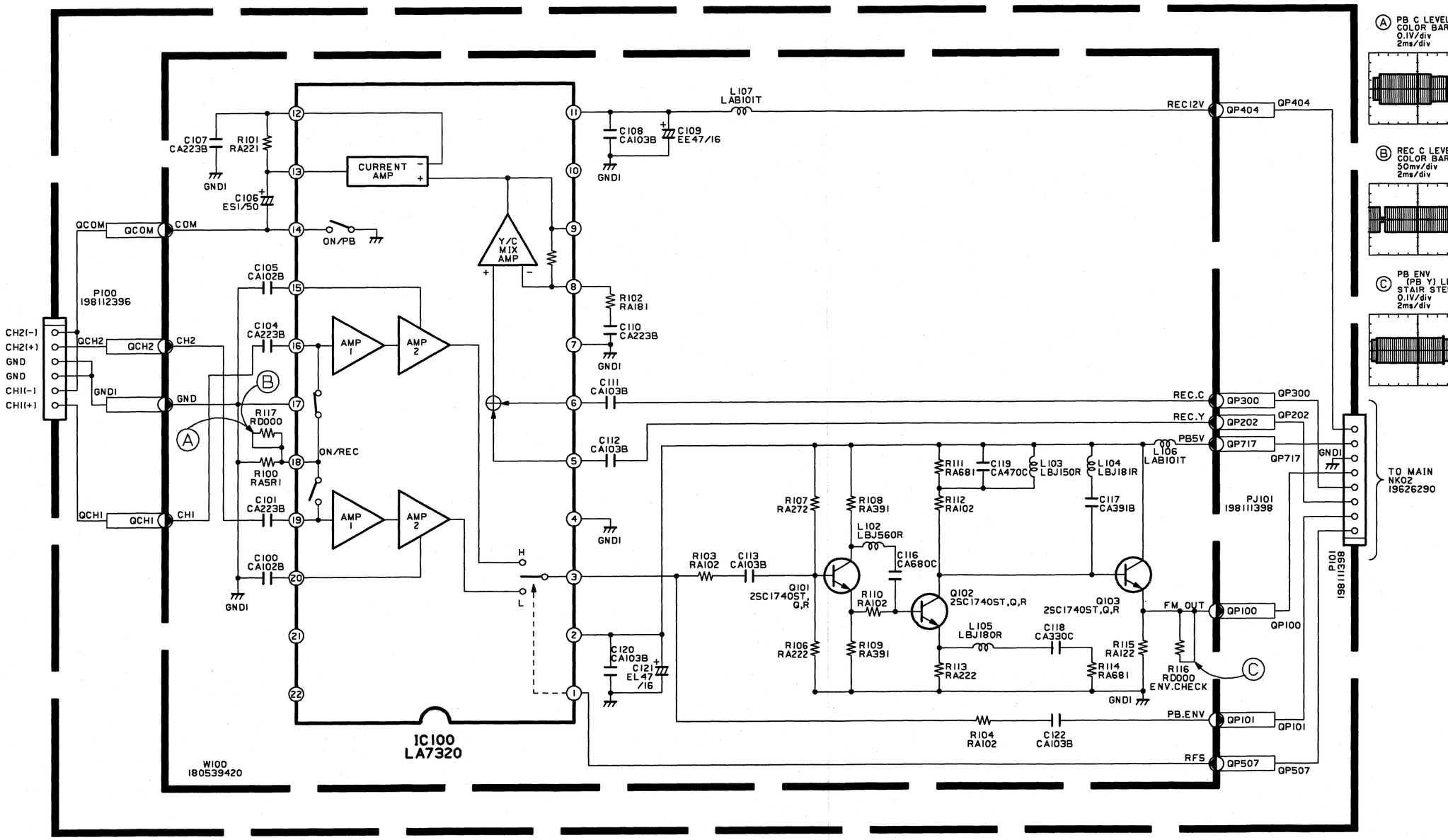
SCHEMATIC DIAGRAM (MAIN-2)



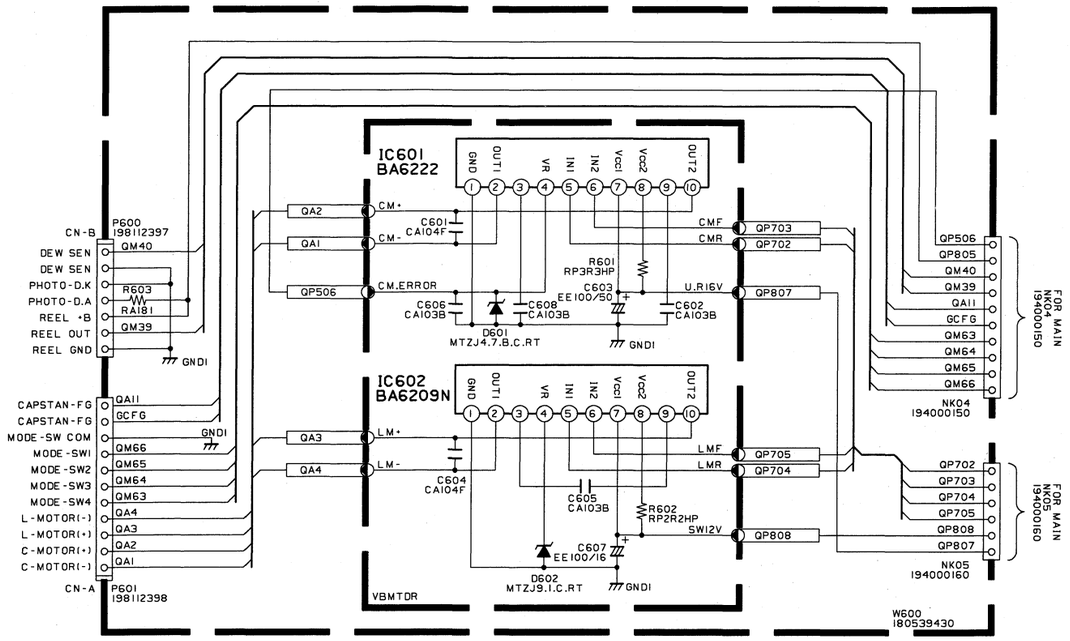
PD4M2N07SD

SCHEMATIC DIAGRAM (HEAD)



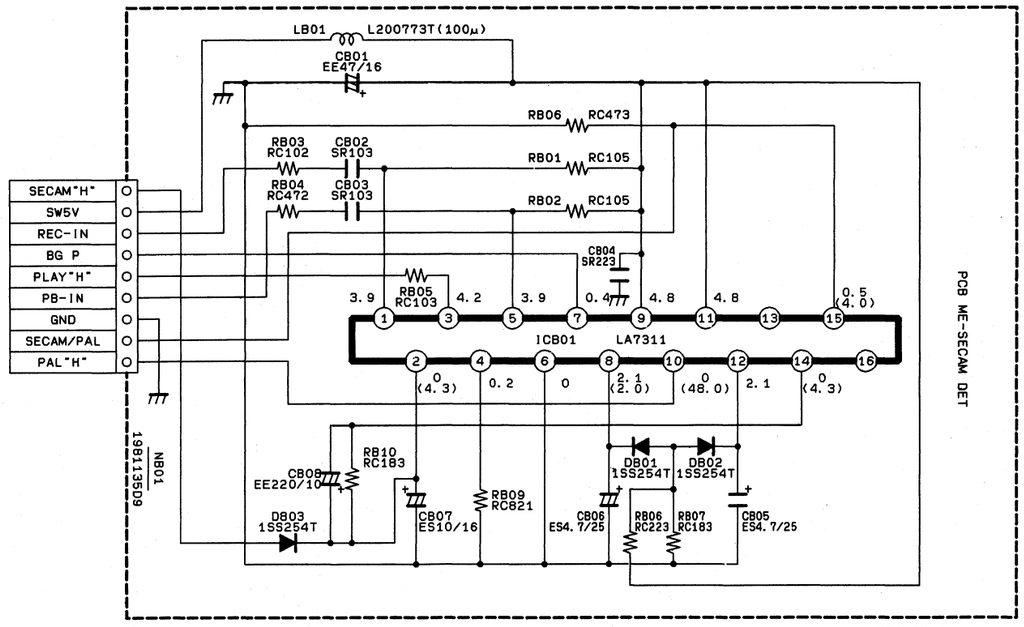
PB4HDA01SD
PD4HDA03SD

SCHEMATIC DIAGRAM (MTDR)



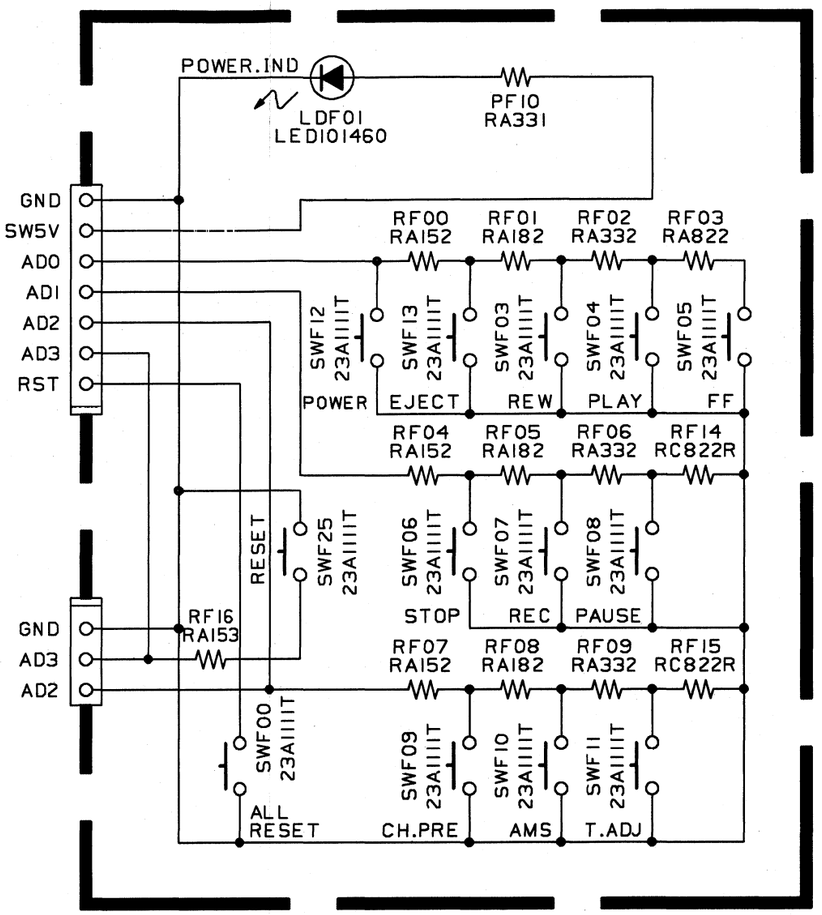
PB4MTD01SD
PD4MTD03SD

SCHEMATIC DIAGRAM (ME-SECAM DET)

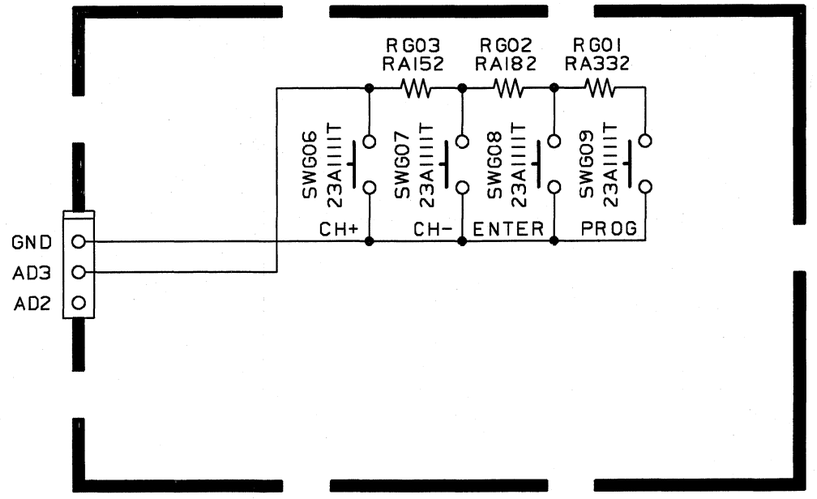


PB4MSD01SD
PD4MSD02SD

SCHEMATIC DIAGRAM (DISP)

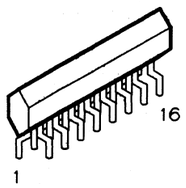
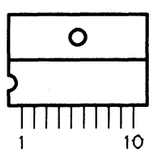
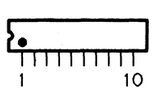
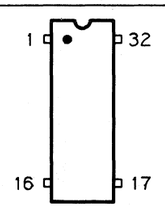
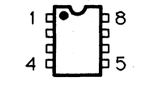
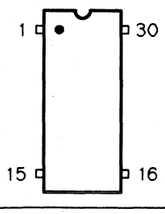


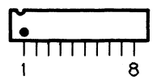
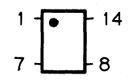
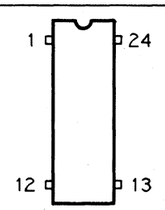
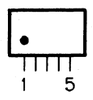
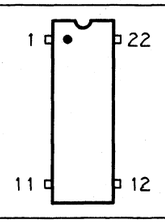
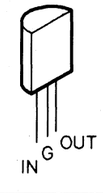
PB4DPL06SD
PD4DPL12SD

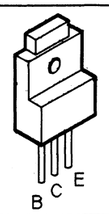
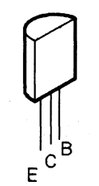
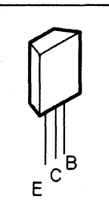


PB4DPR04SD
PD4DPR07SD

4. IC, TRANSISTOR LEAD IDENTIFICATION

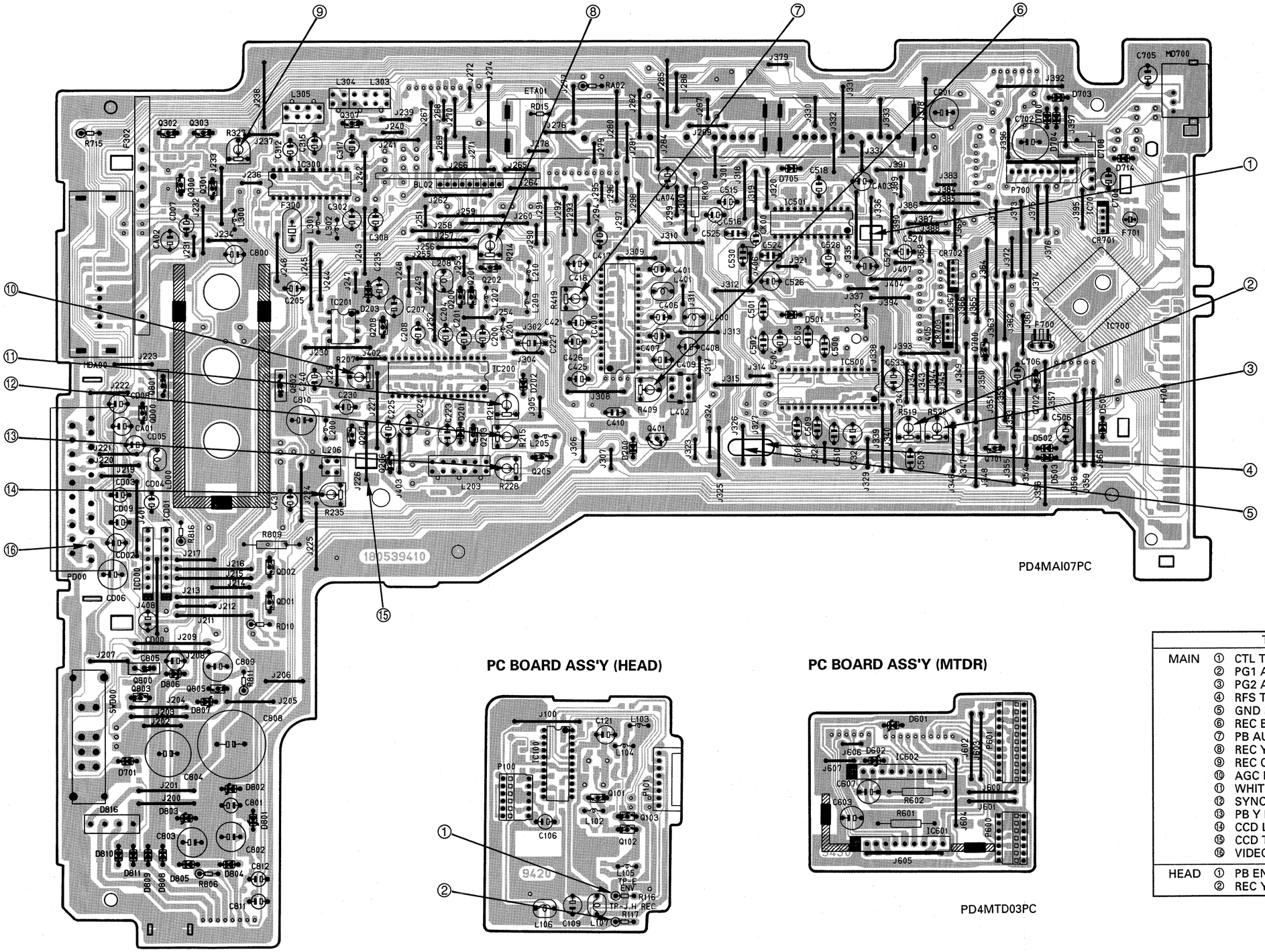
	LA7311
	BA6222
	BA6209N
	M50455.087SP BA7767
	MSM7401RS
	LC7412N.8051 LA7323

	LA7016
	SDA5642
	LA7116 LA7330
	LA7213
	LA7320
	PST 529K.2

	2SD1944J.K
	2SD734.F
	2SA933ST.R.S 2SB810T.E.F 2SB891.Q.R 2SC1740ST.Q.R DTA124EST DTC124EST RN2205ST

5. ELECTRICAL PARTS LOCATION

PC BOARD ASS'Y (MAIN)



PD4MAI07PC

PC BOARD ASS'Y (HEAD)

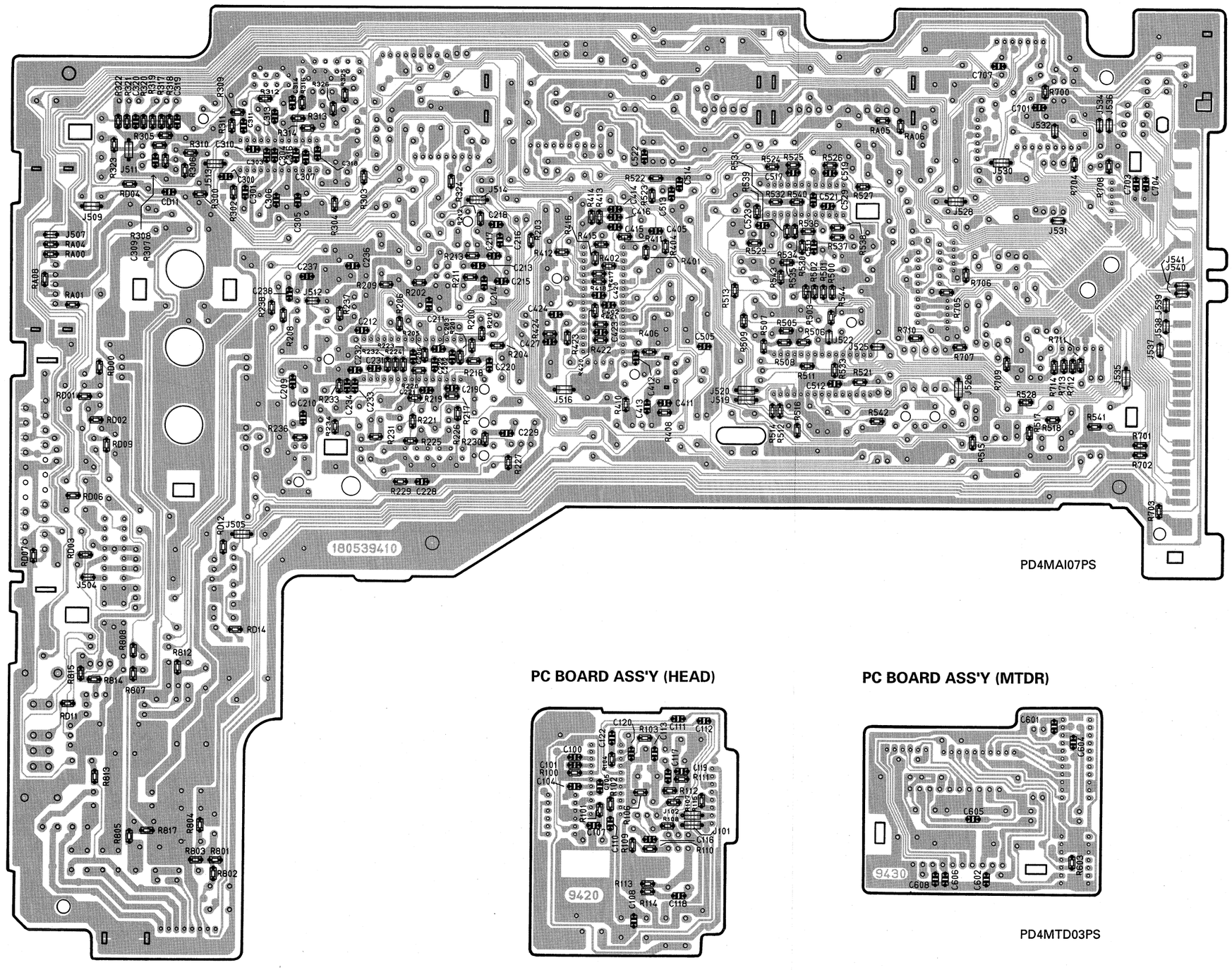
PD4HDA03PC

PC BOARD ASS'Y (MTDR)

PD4MTD03PC

		TEST POINT	PARTS No.
MAIN	①	CTL TEST POINT (TP-B)	J336
	②	PG1 ADJ. V.R.	R519
	③	PG2 ADJ. V.R.	R520
	④	RFS TEST POINT (TP-C)	J327
	⑤	GND POINT (TP-D)	J326
	⑥	REC BIAS LEVEL ADJ. V.R.	R409
	⑦	PB AUDIO LEVEL ADJ. V.R.	R419
	⑧	REC Y LEVEL ADJ. V.R.	R214
	⑨	REC C LEVEL ADJ. V.R.	R327
	⑩	AGC LEVEL ADJ. V.R.	R207
	⑪	WHITE PEAK LEVEL ADJ. V.R.	R216
	⑫	SYNC TIP (CARRER) LEVEL ADJ. V.R.	R215
	⑬	PB Y LEVEL ADJ. V.R.	R228
	⑭	CCD LEVEL ADJ. V.R.	R235
	⑮	CCD TEST POINT (TP-K)	J226
	⑯	VIDEO TEST POINT (TP-A)	PD00
HEAD	①	PB ENV. TEST POINT (TP-E)	R116
	②	REC Y/C TEST POINT (TP-J.H)	R117

PC BOARD ASS'Y (MAIN)



PD4MAI07PS

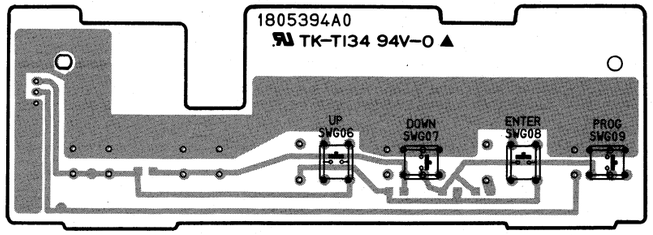
PC BOARD ASS'Y (HEAD)

PD4HDA03PS

PC BOARD ASS'Y (MTDR)

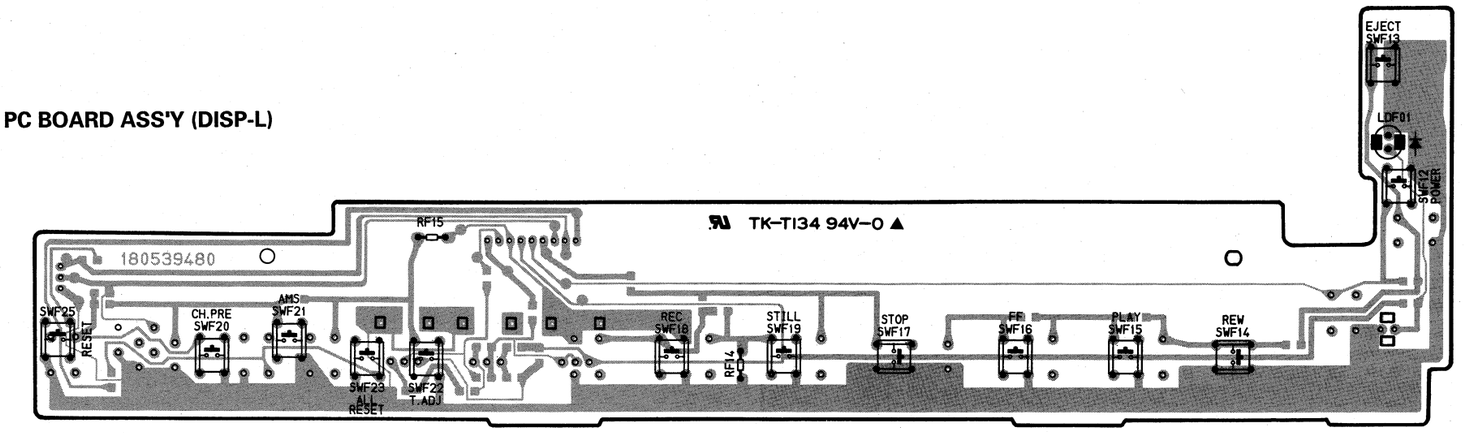
PD4MTD03PS

PC BOARD ASS'Y (DISP-R)



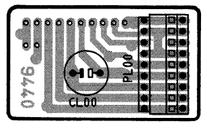
PD4DPR07PC

PC BOARD ASS'Y (DISP-L)



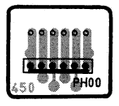
PD4DPL12PC

PC BOARD ASS'Y (DM)



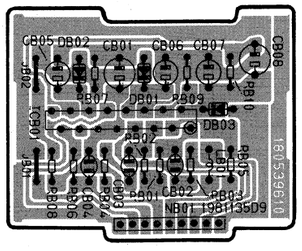
PD4DRM02PC

PC BOARD ASS'Y (CONN)



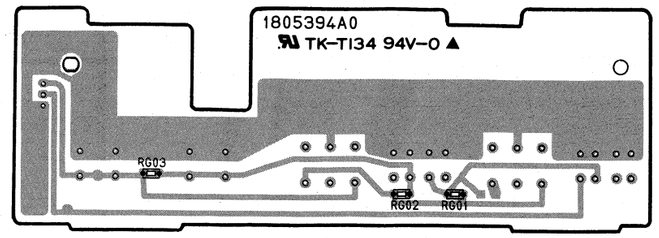
PD4CNN02PC

PC BOARD ASS'Y (ME-SECAM DET)



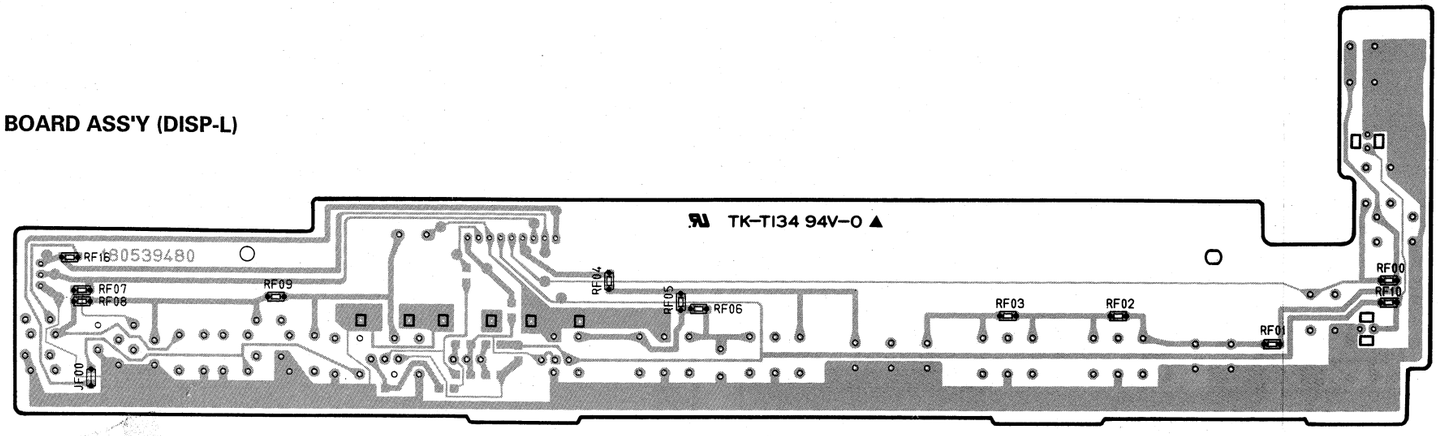
PD4MSD02PC

PC BOARD ASS'Y (DISP-R)



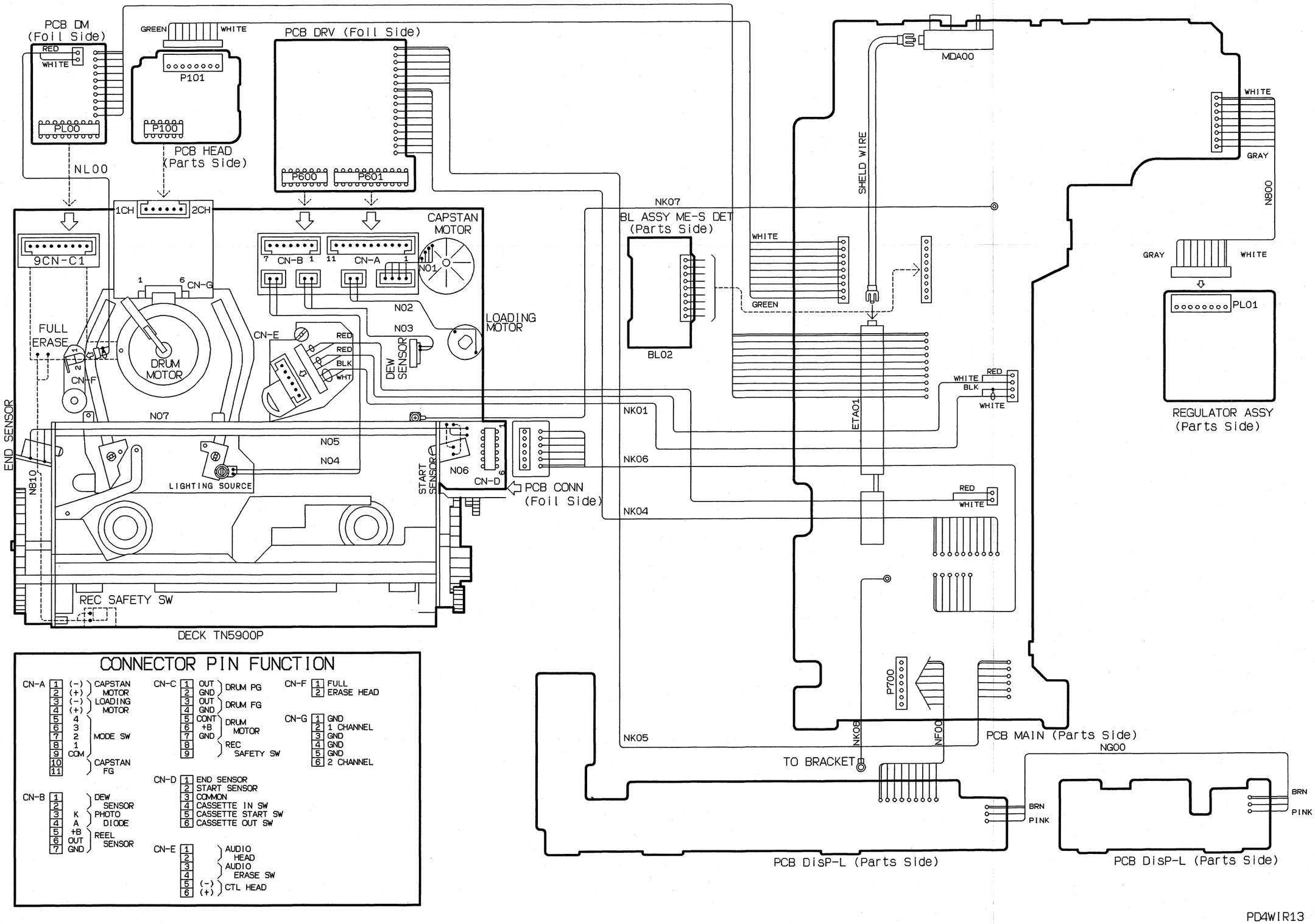
PD4DPR07PS

PC BOARD ASS'Y (DISP-L)



PD4DPL12PS

6. WIRING DIAGRAM



CONNECTOR PIN FUNCTION

CN-A 1	(-)	CAPSTAN MOTOR	
2	(+)		
3	(-)	LOADING MOTOR	
4	(+)		
5	4	MODE SW	
6	3		
7	2		
8	1		
9	COM		
10		CAPSTAN FG	
11			

CN-B 1		DEW SENSOR	
2			
3	K	PHOTO DIODE	
4	A		
5	+B	REEL SENSOR	
6	OUT		
7	GND		

CN-C 1	OUT	DRUM PG	
2	GND		
3	OUT	DRUM FG	
4	GND		
5	CONT	DRUM MOTOR	
6	+B		
7	GND		
8		REC SAFETY SW	
9			

CN-D 1	END SENSOR	
2	START SENSOR	
3	COMMON	
4	CASSETTE IN SW	
5	CASSETTE START SW	
6	CASSETTE OUT SW	

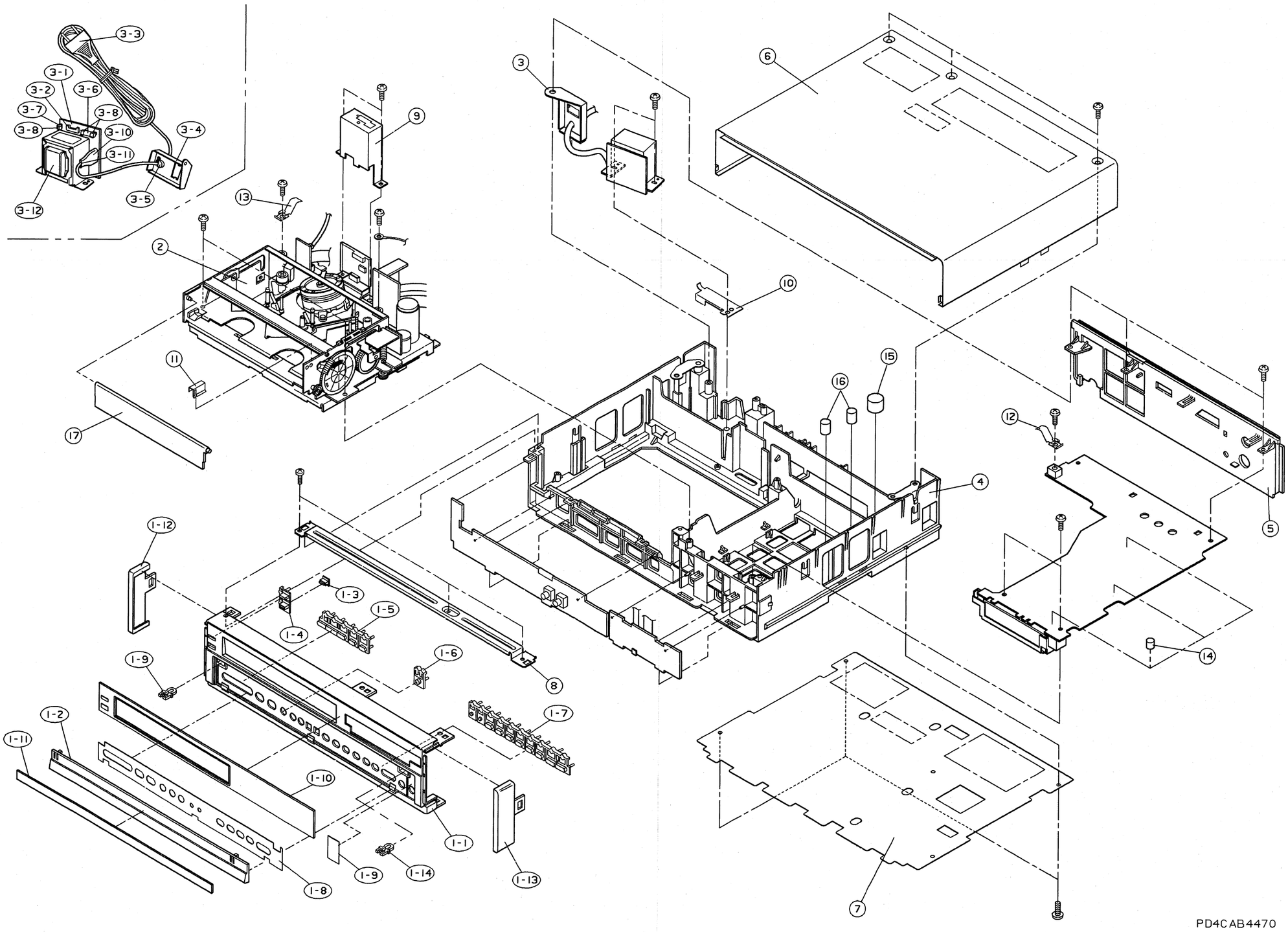
CN-E 1		AUDIO HEAD
2		
3		AUDIO ERASE SW
4		
5	(-)	CTL HEAD
6	(+)	

CN-F 1	FULL	
2	ERASE HEAD	

CN-G 1	GND
2	1 CHANNEL
3	GND
4	GND
5	GND
6	2 CHANNEL

PD4WIR13

7. CABINET EXPLODED VIEW



PD4CAB4470

8. ELECTRICAL PARTS LIST

CABINET & CHASSIS

Ref. No.	Part No.	Description
1	2231815	Face Plate Ass'y, TEC3835E
2	59216	Deck Mechanism,TN5900P 2SRN104
3	29X0015	Regulator Ass'y E-220
4	2270128	Chassis Ass'y
5	2212433	Holder (BG DK)
6	2104448	Cover (TOP)
7	2104447	Cover (BOTTOM)
8	2117168	Bracket
9	2123264	Shield Plate
10	2123276	Shield Plate
11	2129054	Plate Spring (DUST)
12	2129064	Plate Spring
13	2215126	Spacer (A)
14	2215127	Spacer (B)
15	2215128	Spacer (C)
16	2240149	Dust Cover
17	2903312A	Screw,TPB2J-3X12SSA
18	2903308A	Screw,TPB2J-3X8SSA
19	2903312C	Screw,TPB2J-3X12SSC
20	2903412A	Screw,TPB2J-4X12SSA
21	2952305A	Screw,DPBS-3X5SSA
22	2903265A	Screw,TPB2J-2.6X5SSA
23	2904312A	Screw,TPP2J-3X12SSA
24 *	35C8910/3681210	PC Board Ass'y,MAIN
25 *	35B9720/3675620	PC Board Ass'y,HEAD
26 *	35B9730/3675630	PC Board Ass'y,DRV
27 *	35B9740/3675640	PC Board Ass'y,DM
28 *	35B9750/3675650	PC Board Ass'y,CONN
29 *	35C0470/3680170	PC Board Ass'y,DISP-L
30 *	35B9780/3680180	PC Board Ass'y,DISP-R
34	28A2972	Main Label, TEC 3835 E

For details of item marked *, refer to pages 32 – 49.

FACE PLATE ASS'Y 2231815

Ref. No.	Part No.	Description
1-1	2203840	Face Plate
1-2	2271508	Cover
1-3	2202284	Indicator
1-4	2269110	Push Button
1-5	2259929	Push Button
1-6	2259930	Push Button
1-7	2269111	Push Button
1-8	2161956	Ornamental Plate
1-9	2161954	Ornamental Plate
1-10	2216680	Cover Glass
1-11	2216681	Cover Glass
1-12	2216682	Cover Glass (L)
1-13	2216683	Cover Glass (R)
1-14	2212413	Holder (LA-1S)

REGULATOR ASS'Y E-220

Ref. No.	Part No.	Description
3-1	180539790	PC-B
3-2	198111398	Post-IL-S-8P-SL2L2-EF
3-3	2602074	Power Cord
3-4	2117263	Braket
3-5	101000900	Bush MP4N4
3-6	26G1008	Mini Fuse 1.25A 250V
3-7	26GA1010	Mini Fuse 800mA 250V
3-8	26N2 005	Fuse Holder
3-9	2681018A	Terminal Guide
3-10	28HA00019	Coupler Cover SB2936
3-11	3869012	Clamp DA-100
3-12	174105400	Power Trans

ACCESSORIES

Ref. No.	Part No.	Description
1	26B1034	Cable Ass'y
2	108026600	Remote Controller, 266
3	29X0009	Battery Kit

MANUALS

Ref. No.	Part No.	Description
1	2884179	Owner's Manual, TEC 3835 E

PACKING MATERIALS

Ref. No.	Part No.	Description
1	283A001	Desiccant (B)20G
2	2821023	Plastic Bag
3	2871227	Styrofoam
4	2851847	Individual Box, TEC 3835 E

PC BOARD ASS'Y(MAIN)35C8910/3681210

Ref. No.	Part No.	Description
W200	180539410	PC Board
BL02	37070B0	PCB Block Ass'y,ME-S DET
C200	155310625	Capacitor,Electrolytic,10uF 16WV
C201	155622525	Capacitor,Electrolytic,2.2uF 50WV
C202	15713300E	Capacitor,Chip,33PF 50WV
C203	157A1030E	Capacitor,Chip,0.01uF 25WV
C204	155622525	Capacitor,Electrolytic,2.2uF 50WV
C205	155310625	Capacitor,Electrolytic,10uF 16WV
C206	157A1030E	Capacitor,Chip,0.01uF 25WV
C207	1553476G5	Capacitor,Electrolytic,47uF 16WV
C208	155622525	Capacitor,Electrolytic,2.2uF 50WV
C209	157A1030E	Capacitor,Chip,0.01uF 25WV
C210	15713900E	Capacitor,Chip,39PF 50WV
C211	157A1030E	Capacitor,Chip,0.01uF 25WV
C212	157A6830E	Capacitor,Chip,0.068uF 25WV
C213	15711800E	Capacitor,Chip,18PF 50WV
C214	15715600E	Capacitor,Chip,56PF 50WV
C215	15781510E	Capacitor,Chip,150PF 50WV
C216	15781810E	Capacitor,Chip,180PF 50WV
C217	157A1030E	Capacitor,Chip,0.01uF 25WV
C218	15713300E	Capacitor,Chip,33PF 50WV
C219	15715R00E	Capacitor,Chip,5PF 50WV
C220	157F3910E	Capacitor,Chip,390PF 50WV
C221	15713300E	Capacitor,Chip,33PF 50WV
C222	15711500E	Capacitor,Chip,15PF 50WV
C223	155003925	Capacitor,Electrolytic,1uF 50WV
C224	155004525	Capacitor,Electrolytic,10uF 16WV
C225	155622525	Capacitor,Electrolytic,2.2uF 50WV
C227	1552107G0	Capacitor,Electrolytic,100uF 10WV
C228	157A2210E	Capacitor,Chip,220PF 25WV
C229	15716800E	Capacitor,Chip,68PF 50WV
C230	155647425	Capacitor,Electrolytic,0.47uF 50WV
C231	15713300E	Capacitor,Chip,33PF 50WV
C232	15716800E	Capacitor,Chip,68PF 50WV
C233	15715600E	Capacitor,Chip,56PF 50WV
C234	15711000E	Capacitor,Chip,10PF 50WV
C235	1553476G5	Capacitor,Electrolytic,47uF 16WV
C236	157A1030E	Capacitor,Chip,0.01uF 25WV
C237	157A1030E	Capacitor,Chip,0.01uF 25WV
C238	157A1030E	Capacitor,Chip,0.01uF 25WV
C240	155447525	Capacitor,Electrolytic,4.7uF 25WV
C300	157A1030E	Capacitor,Chip,0.01uF 25WV
C301	15711010E	Capacitor,Chip,100PF 50WV
C302	1553476G5	Capacitor,Electrolytic,47uF 16WV
C303	157A1030E	Capacitor,Chip,0.01uF 25WV
C304	15713R00E	Capacitor,Chip,3PF 50WV

PC BOARD ASS'Y(MAIN)35B9810/3675710

Ref. No.	Part No.	Description
C305	15714300E	Capacitor,Chip,43PF 50WV
C306	15781510E	Capacitor,Chip,150PF 50WV
C307	157A1030E	Capacitor,Chip,0.01uF 25WV
C308	155610525	Capacitor,Electrolytic,1uF 50WV
C309	157A1030E	Capacitor,Chip,0.01uF 25WV
C310	157A2230E	Capacitor,Chip,0.022uF 25WV
C311	157A1030E	Capacitor,Chip,0.01uF 25WV
C312	155610525	Capacitor,Electrolytic,1uF 50WV
C313	15711010E	Capacitor,Chip,100PF 50WV
C314	15711010E	Capacitor,Chip,100PF 50WV
C315	155610525	Capacitor,Electrolytic,1uF 50WV
C316	157A2230E	Capacitor,Chip,0.022uF 25WV
C317	155610525	Capacitor,Electrolytic,1uF 50WV
C318	157A4730E	Capacitor,Chip,0.047uF 25WV
C319	157A2230E	Capacitor,Chip,0.022uF 25WV
C320	157A2230E	Capacitor,Chip,0.022uF 25WV
C401	155310625	Capacitor,Electrolytic,10uF 16WV
C402	157A1030E	Capacitor,Chip,0.01uF 25WV
C405	157A1230E	Capacitor,Chip,0.012uF 25WV
C406	155310625	Capacitor,Electrolytic,10uF 16WV
C407	155447525	Capacitor,Electrolytic,4.7uF 25WV
C408	1553476G5	Capacitor,Electrolytic,47uF 16WV
C409	155322625	Capacitor,Electrolytic,22uF 16WV
C410	153C47305	Capacitor,Mylar,0.047uF 100WV
C411	157A1030E	Capacitor,Chip,0.01uF 25WV
C412	157A2210E	Capacitor,Chip,220PF 25WV
C413	157A1020E	Capacitor,Chip,0.001uF 25WV
C414	157A2210E	Capacitor,Chip,220PF 25WV
C415	15711010E	Capacitor,Chip,100PF 50WV
C416	15711010E	Capacitor,Chip,100PF 50WV
C417	155610525	Capacitor,Electrolytic,1uF 50WV
C418	155447525	Capacitor,Electrolytic,4.7uF 25WV
C420	157F8220E	Capacitor,Chip,0.0082uF 50WV
C421	155610525	Capacitor,Electrolytic,1uF 50WV
C423	157A1030E	Capacitor,Chip,0.01uF 25WV
C424	15711010E	Capacitor,Chip,100PF 50WV
C425	155447525	Capacitor,Electrolytic,4.7uF 25WV
C426	155310625	Capacitor,Electrolytic,10uF 16WV
C427	157A2220E	Capacitor,Chip,0.0022uF 25WV
C430	155647425	Capacitor,Electrolytic,0.47uF 50WV
C500	154310455	Capacitor,TF,0.1uF 50WV
C501	153447305	Capacitor,Mylar,0.047uF 50WV
C502	153447205	Capacitor,Mylar,0.0047uF 50WV
C503	153410405	Capacitor,Mylar,0.1uF 50WV
C504	155310625	Capacitor,Electrolytic,10uF 16WV
C505	157A1030E	Capacitor,Chip,0.01uF 25WV

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Ref. No.	Part No.	Description
C506	1553476G5	Capacitor,Electrolytic,47uF 16WV
C507	153447305	Capacitor,Mylar,0.047uF 50WV
C508	153447305	Capacitor,Mylar,0.047uF 50WV
C509	154339355	Capacitor,TF,0.039uF 50WV
C510	154339355	Capacitor,TF,0.039uF 50WV
C511	157A1030E	Capacitor,Chip,0.01uF 25WV
C512	157A1020E	Capacitor,Chip,0.001uF 25WV
C513	157A1030E	Capacitor,Chip,0.01uF 25WV
C514	157A1030E	Capacitor,Chip,0.01uF 25WV
C515	155310625	Capacitor,Electrolytic,10uF 16WV
C516	155310625	Capacitor,Electrolytic,10uF 16WV
C517	15711010E	Capacitor,Chip,100PF 50WV
C518	155310625	Capacitor,Electrolytic,10uF 16WV
C519	15711010E	Capacitor,Chip,100PF 50WV
C520	155310625	Capacitor,Electrolytic,10uF 16WV
C521	157A1030E	Capacitor,Chip,0.01uF 25WV
C522	157A1030E	Capacitor,Chip,0.01uF 25WV
C523	157A1020E	Capacitor,Chip,0.001uF 25WV
C524	154322455	Capacitor,TF,0.22uF 50WV
C525	154322455	Capacitor,TF,0.22uF 50WV
C526	1552107G5	Capacitor,Electrolytic,100uF 10WV
C527	155347645	Capacitor,Electrolytic,47uF 16WV
C528	155310625	Capacitor,Electrolytic,10uF 16WV
C529	157A1020E	Capacitor,Chip,0.001uF 25WV
C530	153410405	Capacitor,Mylar,0.1uF 50WV
C532	1553476G5	Capacitor,Electrolytic,47uF 16WV
C533	1553476G5	Capacitor,Electrolytic,47uF 16WV
C700	155622525	Capacitor,Electrolytic,2.2uF 50WV
C701	157A1030E	Capacitor,Chip,0.01uF 25WV
C702	1552227G5	Capacitor,Electrolytic,1000uF 16WV
C703	15712200E	Capacitor,Chip,22PF 50WV
C704	15712200E	Capacitor,Chip,22PF 50WV
C705	1553476G5	Capacitor,Electrolytic,47uF 16WV
C706	155310625	Capacitor,Electrolytic,10uF 16WV
C707	15711010E	Capacitor,Chip,100PF 50WV
C708	1507013B0	Capacitor,Double Layer,47000uF
C800	1553476G5	Capacitor,Electrolytic,47uF 16WV
C801	155633525	Capacitor,Electrolytic,3.3uF 50WV
C802	1556107G5	Capacitor,Electrolytic,100uF 50WV
C803	1556107G5	Capacitor,Electrolytic,100uF 50WV
C804	1553228G0	Capacitor,Electrolytic,2200uF 16WV
C805	1553476G5	Capacitor,Electrolytic,47uF 16WV
C808	1554478G0	Capacitor,Electrolytic,4700uF 25WV
C809	1553227G5	Capacitor,Electrolytic,220uF 16WV
C810	1553227G5	Capacitor,Electrolytic,220uF 16WV
C811	155633525	Capacitor,Electrolytic,3.3uF 50WV

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Ref. No.	Part No.	Description
C812	155633525	Capacitor,Electrolytic,3.3uF 50WV
CA01	1553476G5	Capacitor,Electrolytic,47uF 16WV
CA02	1553476G5	Capacitor,Electrolytic,47uF 16WV
CA03	1553476G5	Capacitor,Electrolytic,47uF 16WV
CA04	1553476G5	Capacitor,Electrolytic,47uF 16WV
CD00	1553476G5	Capacitor,Electrolytic,47uF 16WV
CD01	1553477M5	Capacitor,Electrolytic,470uF 16WV
CD02	1553476G5	Capacitor,Electrolytic,47uF 16WV
CD03	155310625	Capacitor,Electrolytic,10uF 16WV
CD04	155310625	Capacitor,Electrolytic,10uF 16WV
CD05	1552107G5	Capacitor,Electrolytic,100uF 10WV
CD06	1553477M5	Capacitor,Electrolytic,470uF 16WV
CD07	155310625	Capacitor,Electrolytic,10uF 16WV
CD08	1552107G5	Capacitor,Electrolytic,100uF 10WV
CD09	155310625	Capacitor,Electrolytic,10uF 16WV
CD11	157A1030E	Capacitor,Chip,0.01uF 25WV
CK00	152610300	Capacitor,Semi-Conductor,0.01uF 25WV
CR701	116077500	CR Component,RGLE4X472J
CR702	116085500	CR Component,RGLE4X473J
CR703	116085500	CR Component,RGLE4X473J
D200	131001909	Diode,1SS133-RT
D201	131001909	Diode,1SS133-RT
D202	131001909	Diode,1SS133-RT
D203	134014619	Diode,MTZJ9.1-C-RT
D500	131001909	Diode,1SS133-RT
D501	131001909	Diode,1SS133-RT
D502	131001909	Diode,1SS133-RT
D503	131001909	Diode,1SS133-RT
D700	131001909	Diode,1SS133-RT
D701	131001909	Diode,1SS133-RT
D703	131001909	Diode,1SS133-RT
D704	131001909	Diode,1SS133-RT
D705	131001909	Diode,1SS133-RT
D714	131001909	Diode,1SS133-RT
D801	134015009	Diode,MTZJ6.2-A,B,C-RT
D802	134015819	Diode,MTZJ36-B,C-RT
D803	134015319	Diode,MTZJ30-C,D-RT
D804	131001809	Diode,1SS145-RT
D805	131001809	Diode,1SS145-RT
D806	134015129	Diode,MTZJ6.8-A-RT
D807	134015719	Diode,MTZJ13-A-RT
D808	132007509	Diode,1SR139-200-RT
D809	132007509	Diode,1SR139-200-RT
D810	132007509	Diode,1SR139-200-RT
D811	132007509	Diode,1SR139-200-RT
D816	132007600	Diode,2KBP02M

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Ref. No.	Part No.	Description
ETA01	104302540	Electronic Tuner,EC-IO-0119
F300	1764063B0	X'Tal,HC-49U4.433619M
F302	170014700	Filter,ADL-SE1844G
F700	175304360	Ceramic,Filter,CST4.19MGW040
F701	176401730	X'Tal,32.768KHZ
H700	143001400	FIP,12BMW7
IC200	111392300	IC,LA7323
IC201	112148500	IC,MSM7401RS
IC300	111382300	IC,LA7330
IC400	111394600	IC,BA7767
IC500	112117300	IC,LC7412N-8051
IC501	111380300	IC,LA7116
IC700	119109400	IC,CXP50116H-122Q
IC701	111363500	IC,PST529K-2
ICD00	111351300	IC,LA7016
ICD01	111351300	IC,LA7016
J504	165200006	Resistor,Chip,1/10W 0ohm
J505	165100006	Resistor,Chip,1/8W 0ohm
J507	165200006	Resistor,Chip,1/10W 0ohm
J509	165100006	Resistor,Chip,1/8W 0ohm
J511	165100006	Resistor,Chip,1/8W 0ohm
J512	165200006	Resistor,Chip,1/10W 0ohm
J513	165100006	Resistor,Chip,1/8W 0ohm
J514	165100006	Resistor,Chip,1/8W 0ohm
J516	165100006	Resistor,Chip,1/8W 0ohm
J519	165100006	Resistor,Chip,1/8W 0ohm
J520	165100006	Resistor,Chip,1/8W 0ohm
J522	165200006	Resistor,Chip,1/10W 0ohm
J525	165200006	Resistor,Chip,1/10W 0ohm
J526	165100006	Resistor,Chip,1/8W 0ohm
J528	165100006	Resistor,Chip,1/8W 0ohm
J530	165100006	Resistor,Chip,1/8W 0ohm
J531	165200006	Resistor,Chip,1/10W 0ohm
J532	165200006	Resistor,Chip,1/10W 0ohm
J534	165200006	Resistor,Chip,1/10W 0ohm
J535	165100006	Resistor,Chip,1/8W 0ohm
J536	165200006	Resistor,Chip,1/10W 0ohm
J537	165200006	Resistor,Chip,1/10W 0ohm
J538	165200006	Resistor,Chip,1/10W 0ohm
J539	165200006	Resistor,Chip,1/10W 0ohm
J540	165200006	Resistor,Chip,1/10W 0ohm
J541	165200006	Resistor,Chip,1/10W 0ohm
L200	172012429	Coil,LF-5.0-470K-RT
L201	172012329	Coil,LF-5.0-330K-RT
L202	172012329	Coil,LF-5.0-330K-RT
L203	171043150	Coil,3.2M-LPF(550N)

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Ref. No.	Part No.	Description
L205	172015529	Coil,LF-5.0-151K-RT
L206	171038650	Coil,3.3M-LPF
L208	172007734	Coil,EL0606RA-101J-FT
L209	172015429	Coil,LF-5.0-820K-RT
L210	172015729	Coil,LF-5.0-271K-RT
L300	172015129	Coil,LF-5.0-150K-RT
L301	172011729	Coil,LF-5.0-2R2M-RT
L302	172015229	Coil,LF-5.0-180K-RT
L303	171038450	Coil,5.06M-BPF
L304	171038350	Coil,1.6M-LPF
L305	171038250	Coil,4.3M-BPF
L400	172007734	Coil,EL0606RA-101J-FT
L401	172007134	Coil,EL0607RA-103J-FT
L402	171042250	Coil,OSC-BIAS
LD00	172007734	Coil,EL0606RA-101J-FT
MD700	106002600	Module,GP1U521J
MDA00	106007400	Module,MCB8-UZ3606
N800	196269491	QS Connector,IL08
NK01	196269190	QS Connector,IL06
NK02	196269290	QS Connector,IL08
NK03	194000140	Flat Wire (A)
NK04	194000150	Flat Wire (B)
NK05	194000160	Flat Wire (C)
NK06	194000230	Flat Wire (D)
NK07	2603071	Ground Cord
P700	198112597	Post,IL-CM-07S-S2T2-WS
PD00	2656141	Connector
Q200	120002201	Transistor,DTC124EST
Q201	120002201	Transistor,DTC124EST
Q202	123174021	Transistor,2SC1740ST-Q,R
Q203	121093321	Transistor,2SA933ST-R,S
Q205	123174021	Transistor,2SC1740ST-Q,R
Q206	123174021	Transistor,2SC1740ST-Q,R
Q207	121093321	Transistor,2SA933ST-R,S
Q208	123174021	Transistor,2SC1740ST-Q,R
Q300	123174021	Transistor,2SC1740ST-Q,R
Q301	123174021	Transistor,2SC1740ST-Q,R
Q302	121093321	Transistor,2SA933ST-R,S
Q303	123174021	Transistor,2SC1740ST-Q,R
Q307	123174021	Transistor,2SC1740ST-Q,R
Q401	124073441	Transistor,2SD734T-F,G
Q700	120002201	Transistor,DTC124EST
Q701	120003201	Transistor,RN2205ST
Q702	123174021	Transistor,2SC1740ST-Q,R
Q800	122089120	Transistor,2SB891-Q,R
Q801	124194400	Transistor,2SD1944-J,K

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Ref. No.	Part No.	Description
Q802	124194400	Transistor,2SD1944-J,K
Q803	120002201	Transistor,DTC124EST
Q805	120002201	Transistor,DTC124EST
QD00	122081011	Transistor,2SB810T-E,F
QD01	120003201	Transistor,RN2205ST
QD02	120002201	Transistor,DTC124EST
R200	165222206	Resistor,Chip,1/10W 2.2Kohm
R201	165215306	Resistor,Chip,1/10W 15Kohm
R202	165210306	Resistor,Chip,1/10W 10Kohm
R203	165233306	Resistor,Chip,1/10W 33Kohm
R204	165258106	Resistor,Chip,1/10W 580ohm
R205	165215406	Resistor,Chip,1/10W 150Kohm
R206	165215406	Resistor,Chip,1/10W 150Kohm
R207	169157517	Resistor,Semi-Fixed,KVBSF637A-103B-MT
R208	165258106	Resistor,Chip,1/10W 580ohm
R209	165212206	Resistor,Chip,1/10W 1.2Kohm
R210	165222106	Resistor,Chip,1/10W 220ohm
R211	165282106	Resistor,Chip,1/10W 820ohm
R212	165218206	Resistor,Chip,1/10W 1.8Kohm
R213	165218206	Resistor,Chip,1/10W 1.8Kohm
R214	169157317	Resistor,Semi-Fixed,KVBSF637A-102B-MT
R215	169162017	Resistor,Semi-Fixed,KVBSF637A-223B-MT
R216	169157517	Resistor,Semi-Fixed,KVBSF637A-103B-MT
R217	165227206	Resistor,Chip,1/10W 2.7Kohm
R218	165258106	Resistor,Chip,1/10W 580ohm
R219	165233206	Resistor,Chip,1/10W 3.3Kohm
R220	165210506	Resistor,Chip,1/10W 1Mohm
R221	165210206	Resistor,Chip,1/10W 1Kohm
R223	165210506	Resistor,Chip,1/10W 1Mohm
R224	165210506	Resistor,Chip,1/10W 1Mohm
R225	165233206	Resistor,Chip,1/10W 3.3Kohm
R226	165210206	Resistor,Chip,1/10W 1Kohm
R227	165247206	Resistor,Chip,1/10W 4.7Kohm
R228	169157417	Resistor,Semi-Fixed,KVBSF637A-472B-MT
R229	165210206	Resistor,Chip,1/10W 1Kohm
R230	165212206	Resistor,Chip,1/10W 1.2Kohm
R231	165222206	Resistor,Chip,1/10W 2.2Kohm
R232	165222206	Resistor,Chip,1/10W 2.2Kohm
R233	165258206	Resistor,Chip,1/10W 5.8Kohm
R234	165222206	Resistor,Chip,1/10W 2.2Kohm
R235	169157517	Resistor,Semi-Fixed,KVBSF637A-103B-MT
R236	165210206	Resistor,Chip,1/10W 1Kohm
R237	165210206	Resistor,Chip,1/10W 1Kohm
R238	165210106	Resistor,Chip,1/10W 100ohm
R300	165212206	Resistor,Chip,1/10W 1.2Kohm
R302	165210406	Resistor,Chip,1/10W 100Kohm

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Ref. No.	Part No.	Description
R303	165218206	Resistor,Chip,1/10W 1.8Kohm
R304	165282206	Resistor,Chip,1/10W 8.2Kohm
R305	165258106	Resistor,Chip,1/10W 580ohm
R306	165222206	Resistor,Chip,1/10W 2.2Kohm
R307	165258106	Resistor,Chip,1/10W 580ohm
R308	165222106	Resistor,Chip,1/10W 220ohm
R309	165215206	Resistor,Chip,1/10W 1.5Kohm
R310	165239206	Resistor,Chip,1/10W 3.9Kohm
R311	165247306	Resistor,Chip,1/10W 47Kohm
R312	165210206	Resistor,Chip,1/10W 1Kohm
R313	165222306	Resistor,Chip,1/10W 22Kohm
R314	165212206	Resistor,Chip,1/10W 1.2Kohm
R316	165210206	Resistor,Chip,1/10W 1Kohm
R317	165239206	Resistor,Chip,1/10W 3.9Kohm
R318	165218206	Resistor,Chip,1/10W 1.8Kohm
R319	165210206	Resistor,Chip,1/10W 1Kohm
R320	165239106	Resistor,Chip,1/10W 390ohm
R321	165210106	Resistor,Chip,1/10W 100ohm
R322	165239206	Resistor,Chip,1/10W 3.9Kohm
R323	165247106	Resistor,Chip,1/10W 470ohm
R324	165222306	Resistor,Chip,1/10W 22Kohm
R325	165210306	Resistor,Chip,1/10W 10Kohm
R326	165222306	Resistor,Chip,1/10W 22Kohm
R327	169157517	Resistor,Semi-Fixed,KVBSF637A-103B-MT
R401	165212306	Resistor,Chip,1/10W 12Kohm
R402	165215206	Resistor,Chip,1/10W 1.5Kohm
R404	165210206	Resistor,Chip,1/10W 1Kohm
R406	165222306	Resistor,Chip,1/10W 22Kohm
R408	165218306	Resistor,Chip,1/10W 18Kohm
R409	169157717	Resistor,Semi-Fixed,KVBSF637A-224B-MT
R410	165210006	Resistor,Chip,1/10W 10ohm
R411	165247306	Resistor,Chip,1/10W 47Kohm
R412	165212306	Resistor,Chip,1/10W 12Kohm
R413	165210406	Resistor,Chip,1/10W 100Kohm
R414	165210406	Resistor,Chip,1/10W 100Kohm
R415	165247206	Resistor,Chip,1/10W 4.7Kohm
R416	165233306	Resistor,Chip,1/10W 33Kohm
R417	165210506	Resistor,Chip,1/10W 1Mohm
R418	165215206	Resistor,Chip,1/10W 1.5Kohm
R419	169157517	Resistor,Semi-Fixed,KVBSF637A-103B-MT
R420	165282206	Resistor,Chip,1/10W 8.2Kohm
R421	165210306	Resistor,Chip,1/10W 10Kohm
R422	165233406	Resistor,Chip,1/10W 330Kohm
R423	165247106	Resistor,Chip,1/10W 470ohm
R424	165222306	Resistor,Chip,1/10W 22Kohm
R500	165222306	Resistor,Chip,1/10W 22Kohm

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Ref. No.	Part No.	Description
R501	165222306	Resistor,Chip,1/10W 22Kohm
R502	165222206	Resistor,Chip,1/10W 2.2Kohm
R503	165222306	Resistor,Chip,1/10W 22Kohm
R505	165222306	Resistor,Chip,1/10W 22Kohm
R506	165210406	Resistor,Chip,1/10W 100Kohm
R507	165247306	Resistor,Chip,1/10W 47Kohm
R508	165222406	Resistor,Chip,1/10W 220Kohm
R509	165210406	Resistor,Chip,1/10W 100Kohm
R511	165222306	Resistor,Chip,1/10W 22Kohm
R512	165222406	Resistor,Chip,1/10W 220Kohm
R513	165210406	Resistor,Chip,1/10W 100Kohm
R514	165210406	Resistor,Chip,1/10W 100Kohm
R515	165210206	Resistor,Chip,1/10W 1Kohm
R516	165222406	Resistor,Chip,1/10W 220Kohm
R517	165222306	Resistor,Chip,1/10W 22Kohm
R518	165222306	Resistor,Chip,1/10W 22Kohm
R519	169157817	Resistor,Semi-Fixed,KVBSF687A-224B-MT
R520	169157817	Resistor,Semi-Fixed,KVBSF687A-224B-MT
R521	165222406	Resistor,Chip,1/10W 220Kohm
R522	165210206	Resistor,Chip,1/10W 1Kohm
R523	165210206	Resistor,Chip,1/10W 1Kohm
R524	165210206	Resistor,Chip,1/10W 1Kohm
R525	165210406	Resistor,Chip,1/10W 100Kohm
R526	165210306	Resistor,Chip,1/10W 10Kohm
R527	165233206	Resistor,Chip,1/10W 3.3Kohm
R528	165210406	Resistor,Chip,1/10W 100Kohm
R529	165210506	Resistor,Chip,1/10W 1Mohm
R530	165222406	Resistor,Chip,1/10W 220Kohm
R531	165210306	Resistor,Chip,1/10W 10Kohm
R532	165210406	Resistor,Chip,1/10W 100Kohm
R533	165222306	Resistor,Chip,1/10W 22Kohm
R534	165258206	Resistor,Chip,1/10W 5.8Kohm
R535	165247106	Resistor,Chip,1/10W 470ohm
R536	165247106	Resistor,Chip,1/10W 470ohm
R537	165247106	Resistor,Chip,1/10W 470ohm
R538	165222406	Resistor,Chip,1/10W 220Kohm
R539	165210406	Resistor,Chip,1/10W 100Kohm
R540	165222306	Resistor,Chip,1/10W 22Kohm
R541	165247206	Resistor,Chip,1/10W 4.7Kohm
R542	165258106	Resistor,Chip,1/10W 580ohm
R543	165222306	Resistor,Chip,1/10W 22Kohm
R544	165247306	Resistor,Chip,1/10W 47Kohm
R700	165210406	Resistor,Chip,1/10W 100Kohm
R701	165222306	Resistor,Chip,1/10W 22Kohm
R702	165222306	Resistor,Chip,1/10W 22Kohm
R703	165210006	Resistor,Chip,1/10W 10ohm

PC BOARD ASS'Y(MAIN)35B9810/3675710

Ref. No.	Part No.	Description
R704	165222306	Resistor,Chip,1/10W 22Kohm
R705	165227406	Resistor,Chip,1/10W 270Kohm
R706	165227406	Resistor,Chip,1/10W 270Kohm
R707	165282306	Resistor,Chip,1/10W 82Kohm
R708	165210206	Resistor,Chip,1/10W 1Kohm
R709	165233306	Resistor,Chip,1/10W 33Kohm
R710	165210306	Resistor,Chip,1/10W 10Kohm
R711	165222306	Resistor,Chip,1/10W 22Kohm
R712	165222306	Resistor,Chip,1/10W 22Kohm
R713	165222306	Resistor,Chip,1/10W 22Kohm
R714	165222306	Resistor,Chip,1/10W 22Kohm
R715	16122R208	Resistor,Carbon,1/4W 2.2ohm
R801	165210206	Resistor,Chip,1/10W 1Kohm
R802	165210206	Resistor,Chip,1/10W 1Kohm
R803	165210406	Resistor,Chip,1/10W 100Kohm
R804	165247106	Resistor,Chip,1/10W 470ohm
R805	165210206	Resistor,Chip,1/10W 1Kohm
R806	161210008	Resistor,Carbon,1/4W 10ohm
R807	165215206	Resistor,Chip,1/10W 1.5Kohm
R808	165222106	Resistor,Chip,1/10W 220ohm
R809	16416R801	Resistor,Metal Oxide,1W 6.8ohm
R811	161212208	Resistor,Carbon,1/4W 1.2Kohm
R812	165222106	Resistor,Chip,1/10W 220ohm
R813	165210306	Resistor,Chip,1/10W 10Kohm
R814	165210206	Resistor,Chip,1/10W 1Kohm
R815	165210306	Resistor,Chip,1/10W 10Kohm
R816	16121R008	Resistor,Carbon,1/4W 1ohm
R817	165210306	Resistor,Chip,1/10W 10Kohm
RA00	165215206	Resistor,Chip,1/10W 1.5Kohm
RA01	165212206	Resistor,Chip,1/10W 1.2Kohm
RA02	16122R208	Resistor,Carbon,1/4W 2.2ohm
RA04	165282206	Resistor,Chip,1/10W 8.2Kohm
RA05	165210406	Resistor,Chip,1/10W 100Kohm
RA06	165210406	Resistor,Chip,1/10W 100Kohm
RA08	165222206	Resistor,Chip,1/10W 2.2Kohm
RD00	165247206	Resistor,Chip,1/10W 4.7Kohm
RD01	165233206	Resistor,Chip,1/10W 3.3Kohm
RD02	165215106	Resistor,Chip,1/10W 150ohm
RD03	165275006	Resistor,Chip,1/10W 75ohm
RD04	165210206	Resistor,Chip,1/10W 1Kohm
RD06	165275006	Resistor,Chip,1/10W 75ohm
RD07	165275006	Resistor,Chip,1/10W 75ohm
RD09	165239306	Resistor,Chip,1/10W 39Kohm
RD10	16122R208	Resistor,Carbon,1/4W 2.2ohm
RD11	165210206	Resistor,Chip,1/10W 1Kohm
RD12	165210206	Resistor,Chip,1/10W 1Kohm

PC BOARD ASS'Y(MAIN)35C8910/3681210

Ref. No.	Part No.	Description
RD14	165210106	Resistor,Chip,1/10W 100ohm
RD15	161310109	Resistor,Carbon,1/6W 100ohm
RK00	16412R20A	Resistor,Metal Oxide,1W 2.2ohm
SWD00	23D1083	Slide Switch,SSSB12
	192001000	Shield Wire
	198300101	Jumper 5MM (INSERT)
	198301801	Jumper 7.5MM (INSERT)
	198301901	Jumper 10MM (INSERT)
	198302001	Jumper 12.5MM (INSERT)
	198302101	Jumper 15MM (INSERT)
	198302201	Jumper 17.5MM (INSERT)
	198302901	Jumper 20MM (INSERT)
	2114355A	Heatsink (REG)
	2117273	Bracket
	2123299	Shield Plate
	2212409	Holder
	2869011	Clamp,LWS-4
	2903308A	Screw,TPB2J-3X8SSA

PCB BLOCK ASS'Y(ME-S DET)37070B0

Ref. No.	Part No.	Description
WB01	180536840	PC Board
CB01	1553476G5	Capacitor,Electrolytic,47uF 16WV
CB02	152610305	Capacitor,Semi-Conductor,0.01uF 25WV
CB03	152610305	Capacitor,Semi-Conductor,0.01uF 25WV
CB04	152622305	Capacitor,Semi-Conductor,0.022uF 25WV
CB05	155447525	Capacitor,Electrolytic,4.7uF 25WV
CB06	155447525	Capacitor,Electrolytic,4.7uF 25WV
CB07	155310625	Capacitor,Electrolytic,10uF 16WV
CB08	1552227G5	Capacitor,Electrolytic,220uF 10WV
DB01	131002101	Diode,1SS254T
DB02	131002101	Diode,1SS254T
DB03	131002101	Diode,1SS254T
ICB01	111324300	IC,LA7311
LB01	172007734	Coil,EL0606RA-101J-FT
NB01	1981135D9	Post,6029B1-09Z002T
RB01	161310504	Resistor,Carbon,1/6W 1Mohm
RB02	161310504	Resistor,Carbon,1/6W 1Mohm
RB03	161310204	Resistor,Carbon,1/6W 1Kohm
RB04	161347204	Resistor,Carbon,1/6W 4.7Kohm
RB05	161310304	Resistor,Carbon,1/6W 10Kohm
RB06	161347304	Resistor,Carbon,1/6W 47Kohm
RB07	161318304	Resistor,Carbon,1/6W 18Kohm
RB08	161322304	Resistor,Carbon,1/6W 22Kohm
RB09	161382104	Resistor,Carbon,1/6W 820ohm
RB10	161318304	Resistor,Carbon,1/6W 18Kohm
	198300101	Jumper 5MM (INSERT)

PC BOARD ASS'Y(HEAD)35B9720/3675620

Ref. No.	Part No.	Description
W100	180539420	PC Board
C100	157A1020E	Capacitor,Chip,0.001uF 25WV
C101	157A2230E	Capacitor,Chip,0.022uF 25WV
C104	157A2230E	Capacitor,Chip,0.022uF 25WV
C105	157A1020E	Capacitor,Chip,0.001uF 25WV
C106	155610525	Capacitor,Electrolytic,1uF 50WV
C107	157A2230E	Capacitor,Chip,0.022uF 25WV
C108	157A1030E	Capacitor,Chip,0.01uF 25WV
C109	1553476G5	Capacitor,Electrolytic,47uF 16WV
C110	157A2230E	Capacitor,Chip,0.022uF 25WV
C111	157A1030E	Capacitor,Chip,0.01uF 25WV
C112	157A1030E	Capacitor,Chip,0.01uF 25WV
C113	157A1030E	Capacitor,Chip,0.01uF 25WV
C116	15716800E	Capacitor,Chip,68PF 50WV
C117	157F3910E	Capacitor,Chip,390PF 50WV
C118	15713300E	Capacitor,Chip,33PF 50WV
C119	15714700E	Capacitor,Chip,47PF 50WV
C120	157A1030E	Capacitor,Chip,0.01uF 25WV
C121	1553476K5	Capacitor,Electrolytic,47uF 16WV
C122	157A1030E	Capacitor,Chip,0.01uF 25WV
IC100	111377300	IC,LA7320
J101	165100006	Resistor,Chip,1/8W 0ohm
J102	165100006	Resistor,Chip,1/8W 0ohm
L102	172015329	Coil,LF-5.0-560K-RT
L103	172015129	Coil,LF-5.0-150K-RT
L104	172015629	Coil,LF-5.0-181K-RT
L105	172015229	Coil,LF-5.0-180K-RT
L106	172007734	Coil,EL0606RA-101J-FT
L107	172007734	Coil,EL0606RA-101J-FT
P100	198112396	Post,IL-SDD-06S-S2L2
P101	198111398	Post,IL-S-8P-S2L2-EF
Q101	123174021	Transistor,2SC1740ST-Q,R
Q102	123174021	Transistor,2SC1740ST-Q,R
Q103	123174021	Transistor,2SC1740ST-Q,R
R100	16525R106	Resistor,Chip,1/10W 5.1ohm
R101	165222106	Resistor,Chip,1/10W 220ohm
R102	165218106	Resistor,Chip,1/10W 180ohm
R103	165210206	Resistor,Chip,1/10W 1Kohm
R104	165210206	Resistor,Chip,1/10W 1Kohm
R106	165222206	Resistor,Chip,1/10W 2.2Kohm
R107	165222206	Resistor,Chip,1/10W 2.2Kohm
R108	165239106	Resistor,Chip,1/10W 390ohm
R109	165239106	Resistor,Chip,1/10W 390ohm
R110	165218206	Resistor,Chip,1/10W 1.8Kohm
R111	165268106	Resistor,Chip,1/10W 680ohm
R112	165210206	Resistor,Chip,1/10W 1Kohm

PC BOARD ASS'Y(HEAD)35B9720/3675620

Ref. No.	Part No.	Description
R113	165222206	Resistor,Chip,1/10W 2.2Kohm
R114	165268106	Resistor,Chip,1/10W 680ohm
R115	165212206	Resistor,Chip,1/10W 1.2Kohm
R116	161200008	Resistor,Carbon,1/4W 0ohm
R117	161200008	Resistor,Carbon,1/4W 0ohm
	198302201	Jumper 17.5MM (INSERT)

PC BOARD ASS'Y(DRV)35B9730/3675630

Ref. No.	Part No.	Description
W600	180539430	PC Board
C601	157B1040E	Capacitor,Chip,0.1uF 25WV
C602	157A1030E	Capacitor,Chip,0.01uF 25WV
C603	1556107G5	Capacitor,Electrolytic,100uF 50WV
C604	157B1040E	Capacitor,Chip,0.1uF 25WV
C605	157A1030E	Capacitor,Chip,0.01uF 25WV
C606	157A1030E	Capacitor,Chip,0.01uF 25WV
C607	1553107G5	Capacitor,Electrolytic,100uF 16WV
C608	157A1030E	Capacitor,Chip,0.01uF 25WV
D601	134013919	Diode,MTZJ4.7-B,C-RT
D602	134014619	Diode,MTZJ9.1-C-RT
IC601	111372600	IC,BA6222
IC602	111398600	IC,BA6209N
P600	198112397	Post,IL-SDD-07S-S2L2
P601	19811239B	Post,IL-SDD-11S-S2L2
R601	16413R30A	Resistor,Metal Oxide,1W 3.3ohm
R602	16412R20A	Resistor,Metal Oxide,1W 2.2ohm
R603	165218106	Resistor,Chip,1/10W 180ohm
	198300101	Jumper 5MM (INSERT)
	198301801	Jumper 7.5MM (INSERT)
	198302001	Jumper 12.5MM (INSERT)
	198302201	Jumper 17.5MM (INSERT)
	198302901	Jumper 20MM (INSERT)
	2114334	Heatsink (DR)
	2903308A	Screw,TPB2J-3X8SSA

PC BOARD ASS'Y(DM)35B9740/3675640

Ref. No.	Part No.	Description
WL00	180539440	PC Board
CL00	1553108M4	Capacitor,Electrolytic,1000uF 16WV
NL00	196269390	QS Connector,IL02
PL00	198112399	Post,IL-SDD-09S-S2L2

PC BOARD ASS'Y(CONN)35B9750/3675650

Ref. No.	Part No.	Description
WH00	180539450	PC Board
PH00	198112496	Post,IL-SDD-06P-S2T2

PC BOARD ASS'Y(DISP-L)35C0470/3680170

Ref. No.	Part No.	Description
WF00	180539480	PC Board
JF00	165200006	Resistor,Chip,1/10W 0ohm
LDF01	141014600	LED,SLR-34VR3F
NF00	194000220	Flat Wire (G)
RF00	165215206	Resistor,Chip,1/10W 1.5Kohm
RF01	165218206	Resistor,Chip,1/10W 1.8Kohm
RF02	165233206	Resistor,Chip,1/10W 3.3Kohm
RF03	165282206	Resistor,Chip,1/10W 8.2Kohm
RF04	165215206	Resistor,Chip,1/10W 1.5Kohm
RF05	165218206	Resistor,Chip,1/10W 1.8Kohm
RF06	165233206	Resistor,Chip,1/10W 3.3Kohm
RF07	165215206	Resistor,Chip,1/10W 1.5Kohm
RF08	165218206	Resistor,Chip,1/10W 1.8Kohm
RF09	165233206	Resistor,Chip,1/10W 3.3Kohm
RF10	165233106	Resistor,Chip,1/10W 330ohm
RF14	161382209	Resistor,Carbon,1/6W 8.2Kohm
RF15	161382209	Resistor,Carbon,1/6W 8.2Kohm
RF16	165215306	Resistor,Chip,1/10W 15Kohm
SWF12	23A1111	Switch,SOA-113HS
SWF13	23A1111	Switch,SOA-113HS
SWF14	23A1111	Switch,SOA-113HS
SWF15	23A1111	Switch,SOA-113HS
SWF16	23A1111	Switch,SOA-113HS
SWF17	23A1111	Switch,SOA-113HS
SWF18	23A1111	Switch,SOA-113HS
SWF19	23A1111	Switch,SOA-113HS
SWF20	23A1111	Switch,SOA-113HS
SWF21	23A1111	Switch,SOA-113HS
SWF22	23A1111	Switch,SOA-113HS
SWF23	23A1111	Switch,SOA-113HS
SWF25	23A1111	Switch,SOA-113HS
	2212178	Holder (IND)

PC BOARD ASS'Y(DISP-R)35B9780/3680180

Ref. No.	Part No.	Description
WG00	1805394A0	PC Board
NG00	195519180	Strip Wire
RG01	165233206	Resistor,Chip,1/10W 3.3Kohm
RG02	165218206	Resistor,Chip,1/10W 1.8Kohm
RG03	165215206	Resistor,Chip,1/10W 1.5Kohm
SWG06	23A1111	Switch,SOA-113HS
SWG07	23A1111	Switch,SOA-113HS
SWG08	23A1111	Switch,SOA-113HS
SWG09	23A1111	Switch,SOA-113HS